

☒ NON-EXEMPT ☐ PARTIALLY EXEMPT ☐ EXEMPT

CF: DE, DDE, DP, COS, Wicker, Beter, Corbett, Lamson

**Board of Commissioners**Ann Holton Chairman  
At LargePaul Delamar Vice-Chairman  
At LargePat Prescott  
Township #1Christine Mele  
Township #2Jimmy Spain  
Township #3Carl Ollison  
Township #4Kenny Heath  
Township #5**COUNTY OF PAMLICO**POST OFFICE BOX 776  
BAYBORO, NORTH CAROLINA  
28515  
(252) 745-3133 / 745-5195  
FAX (252) 745-5514County Clerk  
Timothy A. BuckClerk to the Board  
Kathy P. CaytonCounty Attorney  
Jimmie B. Hicks, Jr.

November 5, 2013

Colonel Steven A. Baker  
Commander, Wilmington District  
U.S. Army Corps of Engineers  
69 Darlington Avenue  
Wilmington, NC 28403

Re: Wetland determination, Spring Creek Farms, LLC

Dear Col. Baker:

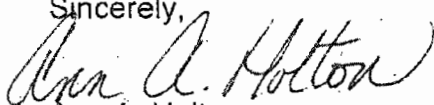
It is our understanding that the U.S. Army Corps of Engineers has determined that an approximately 251 acre tract of former forested land near Merritt owned by Spring Creek Farms, LLC of Petersburg, Illinois does not include wetlands. The owners of the tract are currently engaged in ditching and land clearing activities that appear to be for the purpose of converting the forested land to a new agricultural use. The Pamlico County Commissioners request that the Corps review its determination that this tract of land does not include wetlands. We further request that the Corps investigate previous drainage activities on this site and the effect of these activities on the hydrology and wetlands on the site.

The County is concerned that clearing, drainage and conversion of this tract from forest to agricultural land will increase the risk of flooding in low lying areas, destroy wildlife habitat, and degrade coastal water quality and fisheries. Pamlico County's farmers work hard to maintain their farms, produce crops, and comply with state and federal environmental requirements. Farmland immediately uphill and adjacent to this 251 acres is designated as "prior converted wetlands" by the Natural Resources Conservation Service, and it makes no sense that this farmland would have once been wetlands while the lower, and wetter property just downhill from these farm fields has been determined not be wetlands by your agency. It is important that all landowners and farmers engaged in forestry and agricultural activities be held to the same standards.

In a letter dated October 30, 2013, the Southern Environmental Law Center (Center) cites information submitted to the Corps by Spring Creek Farms, LLC that states the subject tract meets the soil and vegetation requirements for a wetland but does not meet the hydrology requirement, at least at the time the hydrology was examined on June 8, 2013 by the landowner's consultant. The Center further states that your agency concurred with this finding when it visited the site on August 7, 2013. They indicate that this submittal by Spring Creek Farms, LLC states the hydrology of the site was not "significantly disturbed" and claims "normal circumstances" were present at the time of the sampling date. Drainage ditches were present on the site at the time of the sampling date, which was not reflected in the submittal to the Corps. Aerial photographs show that a logging road was present on the tract prior to 1988 but the drainage ditches were constructed on the site between 1988 and 1993. Based upon a review of your agency files, the Center concludes no investigation was conducted to determine when these ditches were dug other than relying on a Google Earth photo taken in 1993. It is our understanding that if these drainage ditches converted the site from wetland to upland sometime between 1988 and 1993 a permit from the Corps would be required. We are not aware of any permit from the Corps that authorized these drainage ditches.

We respectfully request that the Corps of Engineers review the determination that the 251 acre tract owned by Spring Creek Farms, LLC does not constitute wetlands. We further request that the Corps investigate previous drainage activities on this site, whether these activities converted the site from wetland to upland, and whether these activities were properly authorized. Finally, we request that that you or your representative appear before our county board at one of our regularly scheduled public meetings (at the earliest possible time) to inform the County of the conclusions of that investigation and the basis for a determination that the subject tract is not wetlands. We have hundreds of citizens in our county seeking answers to these same questions, and urgently await your response and explanations.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ann A. Holton".

Ann A. Holton  
Chairman

cc Honorable Richard Burr  
Honorable Kay Hagan  
Honorable Walter Jones



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
WILMINGTON DISTRICT, CORPS  
69 DARLINGTON AV  
WILMINGTON, NORTH CAROLINA 28403-1343

Document ID: 0003

☒ NON-EXEMPT ☐ PARTIALLY EXEMPT ☐ EXEMPT

April 15, 2014

Regulatory Division

Action ID Number: SAW-2013-01700

2014 APR 24 13:36 CWF

Ms. Molly Davis, Chief, Wetlands Enforcement Section  
Water Protection Division, Clean Water Enforcement Branch  
U.S. Environmental Protection Agency  
61 Forsyth Street, SW  
Atlanta, Georgia 30303-8960

Dear Ms. Davis:

This letter is in reference to the activities allegedly conducted in waters of the United States, specifically wetlands adjacent to tributaries to the Neuse and Bay Rivers, on an approximately 4,600-acre project area (known as Spring Creek Farms, LLC property), located along the south side of Florence Road (NCSR 1324), east of NC Highway 55, east of the community of Merritt, Pamlico County, North Carolina. Please reference your site visit on December 3 and 4, 2013, with Mr. Mike Wylie of your office and Ms. Emily Greer, Mr. Bill Biddlecome, and Mr. Henry Wicker of the U.S. Army Corps of Engineers, Wilmington Regulatory Division (Corps). Please also reference the EPA's Memorandum regarding this site visit, initialed by you on February 3, 2014; copy enclosed.

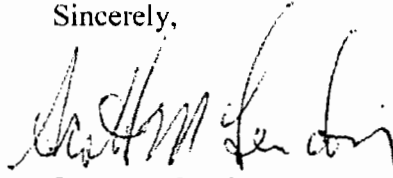
As you are aware, Spring Creek Farms, LLC recently acquired multiple land parcels which comprise the approximately 4,600-acre project area, on which previous land owners conducted silviculture activities. These activities included the excavation of ditches through and the subsequent side-casting of the excavated material into waters of the United States. Review of available aerial photography reveals that these activities occurred between 1988 and 1993; moreover, the Corps believes that the ditches excavated in wetlands removed wetland hydrology.

The District believes that the ditching activity, as described above, exceeds that allowed under 404 f (1). In this regard and in light of the Interpretive Rule recently implemented by the US EPA, and after consideration of the nature and extent of the activities that have occurred on the site, we believe it is appropriate that Region IV, US EPA provide clarification regarding activities on farming, ranching, and forestry lands that may be exempt from DA permitting requirements as provided for at 404 f (1) a. In accordance with the January 19, 1989, Memorandum of Agreement between the Department of Army (DA) and the Environmental Protection Agency (EPA) concerning Federal Enforcement for the Section 404 Program of the Clean Water Act, as well as the December 3, 2012, Memorandum for the DA and the EPA regarding Section 404 CWA enforcement coordination, the Corps, as the investigating agency, concludes that the EPA is the appropriate lead enforcement agency for the above-cited activities. Based on our February 19, 2014, telephone conversation, the Corps understands that the EPA agrees to act as the lead enforcement agency. The Corps looks forward to assisting the EPA in resolving this matter.



If you have any questions regarding this case or require any additional information, please contact me or Ms. Jennifer Frye of the Wilmington Regulatory Division, telephone 910-251-4923 or email [jennifer.s.frye@usace.army.mil](mailto:jennifer.s.frye@usace.army.mil).

Sincerely,

A handwritten signature in black ink, appearing to read "Scott McLendon", written over a horizontal line.

Scott McLendon  
Chief, Regulatory Division  
Wilmington District

Enclosure

Blind Copies Furnished:

CESAW-RG/McLendon, Wicker, Frye  
CESAW-RG-W/Biddlecome, Greer  
CESAW-OC/Pruitt



## North Carolina Department of Environment and Natural Resources

Division of Water Resources

Water Quality Programs

Pat McCrory  
GovernorThomas A. Reeder  
DirectorJohn E. Skvarla, III  
Secretary

August 13, 2013


Spring Creek Farms, LLC  
Attn: Mr. Benjamin L. King  
346 MLK Boulevard, Suite 95  
Clinton, NC 28562Subject Property: Site Inspection  
Spring Creek Farms, LLC Property  
Wetland Project No.: WT001531  
Pamlico County

Dear Mr. King:

On August 7, 2013, Anthony Scarbraugh of the Division of Water Resources (DWR), Emily Greer of the US Army Corps of Engineers (US ACOE) and Abel Harmon, your consultant, met at the subject properties known as Pamlico County Tax Pin No(s). 6499009986 and 6498171514 located approximately 2 miles southeast of the intersection of NC Highway 55 and East Trent Road in Merritt, Pamlico County. The purpose of DWR staff inspection was to respond to a complaint of possible wetland standard violation associated with the conversion of silviculture lands to agricultural lands. During the inspection, DWR staff observed the maintenance of existing drainage ditches and on-going logging activities at the subject properties. Mr. Harmon stated that your intent was to clear the subject properties for agriculture production after receiving the applicable authorization from US ACOE. During the inspection, DWR staff observed no clearing of the subject properties that violated wetland under 15A NCAC 02B .0231.

If you have any additional questions or require additional information please call Anthony Scarbraugh in the Washington Regional Office at (252) 948-3924.

Sincerely,

  
Amy Adams, Regional Supervisor  
Surface Water Protection Section  
Washington Regional Office

Enclosure: Wetland Standards

cc: WaRO Files  
Shelton Sullivan – WBS Compliance & Permitting Unit  
Emily Greer – US ACOE Washington Office



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

APR 10 2014

CERTIFIED MAIL 7012 1010 0002 0759 7042  
RETURN RECEIPT REQUESTED

Spring Creek Farms, LLC  
Mr. Benjamin L. King  
346 MLK Boulevard, Suite 95  
Clinton, North Carolina 28562

Re: Spring Creek Farms Site

Dear Mr. King:

I am writing to discuss the findings of a recent United States Environmental Protection Agency Region 4 field investigation of the Spring Creek Farms site located near Merritt, Pamlico County, North Carolina, near 35° 4' 47" north latitude and 76° 41' 24" west longitude (Site). The Site is also referred to as the Atlas Tract, an approximately 4,600 acre parcel mapped by the United States Fish and Wildlife Service's National Wetlands Inventory as containing predominantly forested wetlands. Additionally, the Natural Resource Conservation Service has determined that a majority of the Site contains hydric soils. On December 3-4, 2013, the EPA and the U.S. Army Corps of Engineers (Corps) conducted a joint site inspection of the Site. Mr. Abel Harmon, consultant for Spring Creek Farms, was also present during the inspection.

During that inspection the group dug pits and looked at hydrology and soils at several areas on the Site including the "251-acre" site and one forested reference area near this tract as well as three areas off Florence Road including a recently harvested "400-acre" site. Light rain was falling during the inspection of the three areas located off Florence Road, but two of the three areas appeared to be wetlands while one area was an upland timbered area. At the "400-acre" site, the EPA and the Corps inspectors found wetland hydrology within 12 inches of the surface at several soil pits. At this location Mr. Harmon noted that most but not all of the antecedent forestry ditches on the 400-acre site had been re-excavated to former depths. The Corps advised Mr. Harmon to avoid further ditch maintenance on the tract until we could reconcile the jurisdictional limits of the 400-acre site. Mr. Mike Wylie, of my staff, contacted Mr. Harmon on February 10, 2014, to discuss the findings from the inspection. During that call, Mr. Harmon informed Mr. Wylie that all the forestry and roadside ditch maintenance activities on the Atlas Tract were now complete on the Atlas Tract.

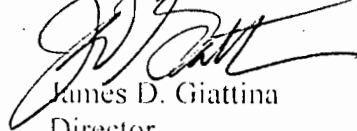
As you are aware, there is significant local interest in the status of potential jurisdictional wetlands on the Atlas Tract. Both the Corps and the EPA have been contacted by interested parties regarding Spring Creek Farms' activities on the Site and whether the current ditch maintenance and land clearing activities are in compliance with the Clean Water Act (CWA).

The EPA and the Corps found that the forestry ditches on the Atlas Tract appeared to remove wetland hydrology on two of the sites we sampled (i.e., the 251-acre site and one of the wetland areas off Florence Road). The EPA and the Corps do not have sufficient information to make a final determination regarding wetland hydrology on the 400-acre tract; however, we are concerned that recent ditch maintenance activities may have adversely impacted the Site.

The EPA and the Corps have several outstanding issues that need to be resolved with Spring Creek Farms before any further mechanical land clearing or ditch excavation and/or maintenance occurs on the Atlas Tract. The original ditch excavation apparently occurred under the pretext of minor drainage in association with the 404(f) silviculture exemptions. The ditches appear to have removed or are capable of removing wetland hydrology and are not considered minor drainage ditches exempt under the CWA. Ditch maintenance, an activity that is normally exempt under the CWA 404(f) exemptions, is not an exempt activity if the original forestry ditches exceeded minor drainage and drained the Atlas Tract without authorization under the CWA. Areas of former wetlands on the Atlas Tract, that appear to have the hydrology removed without authorization, should be considered waters of United States unless new evidence dictates otherwise. Finally, please do not conduct any further ditch maintenance, ditch construction or land clearing activities on the Atlas Tract until a meeting can be arranged with the EPA to discuss these issues.

Please contact Ms. Molly Davis, of my staff, at (404) 562-9236 or please have your attorney contact Mr. Philip Mancusi-Ungaro at (404) 562-9519 to arrange a meeting to discuss these important issues.

Sincerely,



James D. Giattina  
Director

Water Protection Division

cc: Mr. Scott McLendon  
U.S. Army Corps of Engineers, Wilmington District

## DAVIS HARTMAN

ATTORNEYS AT LAW

ASHEVILLE

NEW BERN

WILMINGTON

MICHAEL SCOTT DAVIS  
MARK SPENCE HARTMAN  
SHANNON ("MISSY") S. SPAINHOUR  
I. CLARK WRIGHT, JR.

209 POLLOCK STREET  
NEW BERN, NC 28560  
PHONE 252-514-2828  
FAX 252-514-9878  
SENDER'S E-MAIL: ICW@DHWLEGAL.COM

July 22, 2014

Philip Mancusi-Ungaro, Esq.  
EPA Region IV  
81 Forsythe Street  
Atlanta, GA 30303-8960

RE: Spring Creek Farms Site  
EPA Letter Dated April 10, 2014

Dear Phil:

The purpose of this letter is to respond, on behalf of our client, Spring Creek Farms, LLC, an Illinois Limited Liability Company, to EPA Region IV's April 10, 2014 letter, addressed to an entity entitled "Spring Creek Farms, LLC" in care of a Mr. Benjamin L. King, residing in Clinton, NC. As you and I recently discussed by telephone, and as previously stated by Abel Harmon to Region IV's Mike Wylie during EPA's site visit, there is no Benjamin King associated with the correct (Illinois based) title holder owner of this property, located in Pamlico County, North Carolina, often referred to locally as "The Atlas Tract."

Our client, Spring Creek Farms, LLC, is an Illinois limited liability company and the actual property owner. The North Carolina LLC of the same name, for which Mr. King apparently serves as registered agent, is completely unrelated to this property. Our client has not yet registered with the North Carolina Secretary of State - no such registration is necessary to purchase and own real property in North Carolina. At some point in the near future, our client will in fact register to conduct business in North Carolina; I will keep you posted as to that process. In the meantime, feel free to direct any communications regarding the actual property owner to me.

With regard to the substance of Region IV's letter, I understand that you agree with me that the letter does not represent a formal stop work request (or any other form of formal agency administrative action for that matter), but rather is more accurately described as an informal notice and request for further, constructive dialogue regarding Region IV's potential concerns as stated in the letter. It is my understanding that Region IV also recognizes that any ditching work (minor drainage or otherwise) that took place on the property in the early-to-mid 1990's certainly was not performed by our client, nor known by our client prior to the Agency's and other rather public (and often inaccurate) statements being made by some local residents.

It is my understanding that there are two areas within the Atlas Tract where the United States Army Corps of Engineers ("Corps") formally has delineated such areas as non-wetlands (i.e., "uplands")

Mancusi-Ungaro, Esq.  
July 22, 2014  
Page 2

within the meaning of Section 404 of the Clean Water Act. Enclosed please find unsigned copies of actual survey plats of these two areas – one consisting of approximately 81.21 acres; the other 258.59 acres. I am assured by our client that the Corps has indeed formally approved and signed these two wetland delineation maps, and I am in the process of attempting to obtain copies to later forward to you.

As I understand it, the approximately 81 acre area is located within non-hydric soils as confirmed by Mike Wylie during Region IV's site visit in December of last year, and was not subjected to any minor drainage ditching in the 1990's. Therefore, it is our understanding that Region IV has no issues with this area, or with any other areas of non-hydric soils within the Atlas Tract lands owned by our client. Please let me know as soon as possible if this is not the case.

With regard to the approximately 260 acre area, it is my understanding that EPA Region IV has potential concerns that some of the so-called "minor drainage" ditching activities that were carried out by prior property owners approximately 20 years ago may have exceeded the parameters of "minor drainage" as allowed under the "recapture" Section 404(f) exemptions, and may have taken place in areas that otherwise at the time would have qualified as wetland waters of the United States within the meaning of relevant provisions of the Clean Water Act. It is our understanding that EPA is concerned that if such ditching work did operate to convert wetlands to uplands, that even though it is now over 20 years later, and even though our client was neither involved nor made aware of these issues (and thus would qualify as an innocent purchaser for value), that such may represent continuing regulatory concerns to the Agency relative to our client's plans to clear such areas, maintain existing ditches, and place these fertile lands into agricultural production.

As you and I have discussed, both recently and back during the so-called Parker Tract litigation, I certainly understand Region IV's regulatory concerns regarding the scope and extent of so-called "minor drainage" ditching activities undertaken by various land owners on various properties that may (or may not) have qualified as wetland waters prior to such work, and which may (or may not) have subsequently become drained upland areas as a result of such activities. I also recognize that there is at least one reported case on the books here in the Eastern District of North Carolina that held, on the facts there, that the continued presence of improperly discharged dredged or fill materials can be considered a "continuing violation" if unlawfully placed dredged spoil remains present within wetland waters. However, having said that, I believe you and I also recognize that there are major problems with the idea that an innocent purchaser for value, decades later, could be held responsible for any such violations – not to mention the obvious problems of proof that would confront the Agency in trying to establish with any degree of certainty what the "normal circumstances" of the properties of concern were back at the time the questioned ditching work was undertaken by prior landowners.

Region IV's letter also appears to speak to a concern regarding our client's recent ditch maintenance work, though little detail provided. As you and I also discussed by telephone, it would appear to be in everyone's mutual interest to arrange for a more involved meeting – perhaps both an office meeting and further on-site meetings. In the meantime, as promised, I am enclosing a survey plat, prepared by our client's surveyor, which attempts to narrow the focus in terms of geographic areas where Region

Mancusi-Ungaro, Esq.  
July 22, 2014  
Page 3

IV may have continuing concerns. The purpose of this map is to seek to reach an understanding with Region IV that lands located outside the labelled "Areas of Possible Concern" are areas within which our client can continue in its efforts to place such lands into economically valuable agricultural production.

With regard to the enclosed map, you will see a Legend that illustrates various areas, including: (a) overall tract boundaries; (b) the 81.21 acre area delineated by the Corps as uplands (this is part of the area that we understand Mike Wylie agrees does not contain hydric soils); (c) roadway centerlines; and (d) – importantly – a number of large drainage ditches and canals that were constructed prior to the effective wetlands regulatory authority date of 1978, which ditches/canals exert significant areas of (lawful) drainage influence (shown on the attached color map using yellow cross-hatching).

For purposes of the enclosed map, we have assumed a minimum drainage influence of 660 feet. We believe that more detailed on site evaluation may lead to expansion of that distance, but we have elected to use 660 feet as a fair, minimum starting point. As you can see, when that influence is taken into account, the remaining Areas of Possible Concern, where either recent ditch maintenance work or decades old "minor drainage" ditching took place, reduces considerably.

Using the enclosed map, we would like to reach agreement with Region IV that outside the numbered "Areas of Possible Concern," our client will remain free to continue work to place such areas into agricultural production, and that the Agency and our client would then focus further investigation efforts within these marked areas.

Finally, our client has authorized me to represent to you that it is willing to consider placing some areas of its land holdings under voluntary, permanent conservation easements designed to better protect riparian areas along surface streams, and possibly within some additional areas within the tract that we come to a meeting of the minds on in terms of potential water quality and/or habitat values, wetlands status, etc.

I look forward to working with you and others at Region IV to address and timely resolve any remaining regulatory issues. In that regard, I remain

Very truly yours,

A handwritten signature in black ink, appearing to read "I. Clark Wright, Jr.", with a stylized, cursive script.

I. Clark Wright, Jr.

ICW:icw

Enclosures

cc: Client (via e-mail)



✓NON-EXEMPT

           PARTIALLY EXEMPT

EXEMPT

Hardwood Flat (w-type 9)  
Poorly drained interstream flats not associated with rivers or estuaries. Seasonally saturated by a high water table or poor drainage. Species vary greatly but often include sweet gum and red maple.

**North Carolina**  
**Division of Coastal Management**  
 Coastal Wetlands

HOME | ABOUT US | CONTACT | QUESTIONS/COMMENTS | LINKS | **PRINT COPY** | 0.4

Map Tools: Home, Full Screen, Zoom In, Zoom Out, Pan, Rotate, Measure, Info, Legend, Layers, Settings, Print, Close

Map Scale: 0 0.4 miles

Map Legend:

Feature	Symbol	Color
Wetland Type	1	Blue
OWR1	2	Green
Water Quality Funct.	3	Yellow
Rating	4	Red
Hydrologic Funct.	5	Purple
Rating	6	Orange
Wetland Funct. Rating	7	Light Blue
Wetland Characteristic	8	Dark Blue
Area (sq. ft.)	9	Light Green

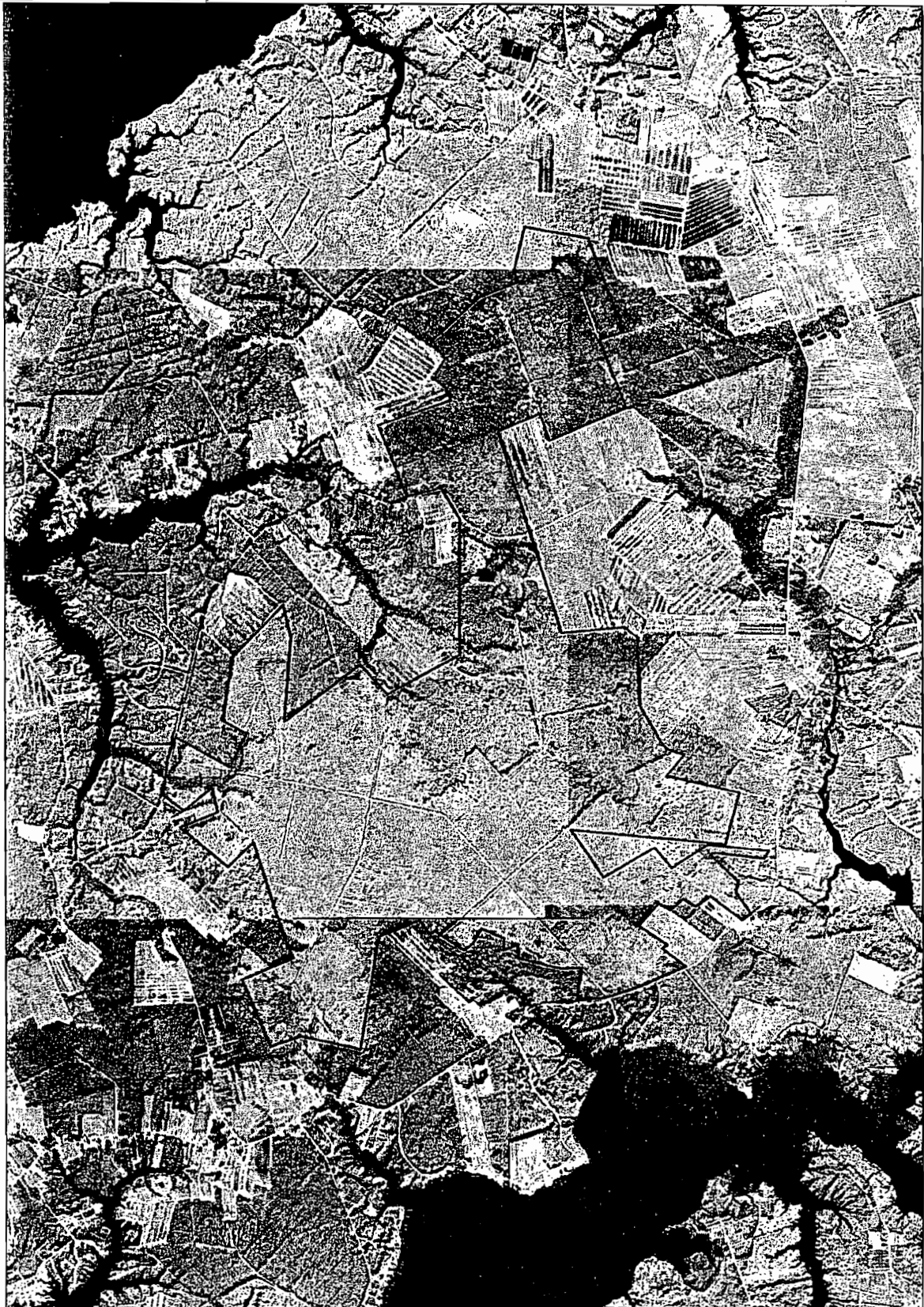
More NC CREWS Info:  
 Wetlands Summary  
 NC CREWS Fact Sheet  
 NC CREWS Coordination Document

Print Close

Map Data: State of North Carolina, USGS, NOAA, and other sources.

Cutover Wetland (w-type 61-77)





Cut-over wetlands (Wong et al. 1994). Areas for which satellite imagery indicates a lack of vegetation in 1994. These areas are likely to still be wetlands, however, they have been recently cut over. The vegetation in cutover areas may be regenerating naturally, or the area may in use for silvicultural activities.

Maple St.  
K. 28





# Division of Coastal Management Coastal Wetlands

REFRESH MAP  
QUESTION/COMMENTS  
select county

Full English + Longitude - Zoom Out - Zoom In - Map



Map Projection: ES  
NC State Plane NAD  
X: 2302419.54  
Y: 431401.74

## LEGEND & LAYER LIST

- ☒ ALL MAP LAYERS
- ☒ WETLANDS
- ☒ Coastal Wetlands
- ☒ Restoration and Enhancement Project
- ☒ NC CREWS
- ☒ BASE MAP
- ☒ Stream - Ditch
- ☒ 2003 Photos

Refresh Map

☒ Auto Refresh

Copyright © 2007  
Last update: 04/03/2007

North Carolina



# Division of Coastal Management

GOASTAL WETLANDS

HOME  
REFRESH MAP  
QUESTIONS/COMMENTS  
LINKS  
Global County 2 Go

Map Editor: + Zoom In - Zoom Out Full Screen Print ? Help

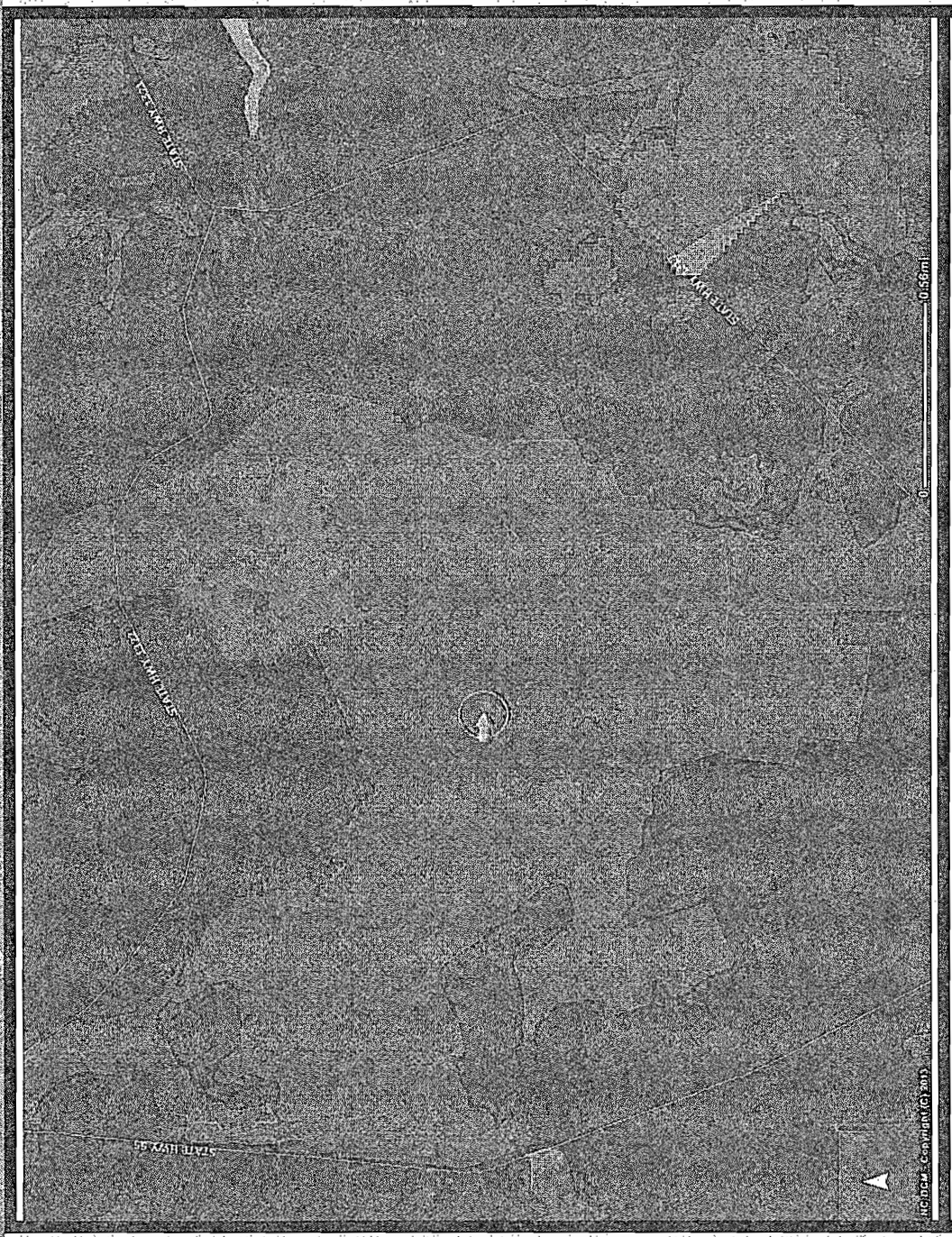
## Coastal Wetlands

- Salt Tracker Marsh
- Emergent Marsh
- Emergent Shrub Scrub
- Roadway
- Bottomland Hardwood
- Swamp Forest
- Hardwood Flat
- Pine Flat
- Managed Pine/land
- Human Impacted
- Martino Forest
- Seasonal Swamp
- Seasonal Forest
- "Clearing"
- "Clearing"
- Wetlands Restoration
- Salt / Danish Marsh
- Emergent Shrub / Scrub
- Swamp Forest & Bottomland HW
- Bottomland HW & Hardwater F.
- Wet Flats/Code
- Pocosins

## Wetlands (NC CREWS)

- Beneficial
- Substantial
- Exceptional
- Unimpaired

Casa

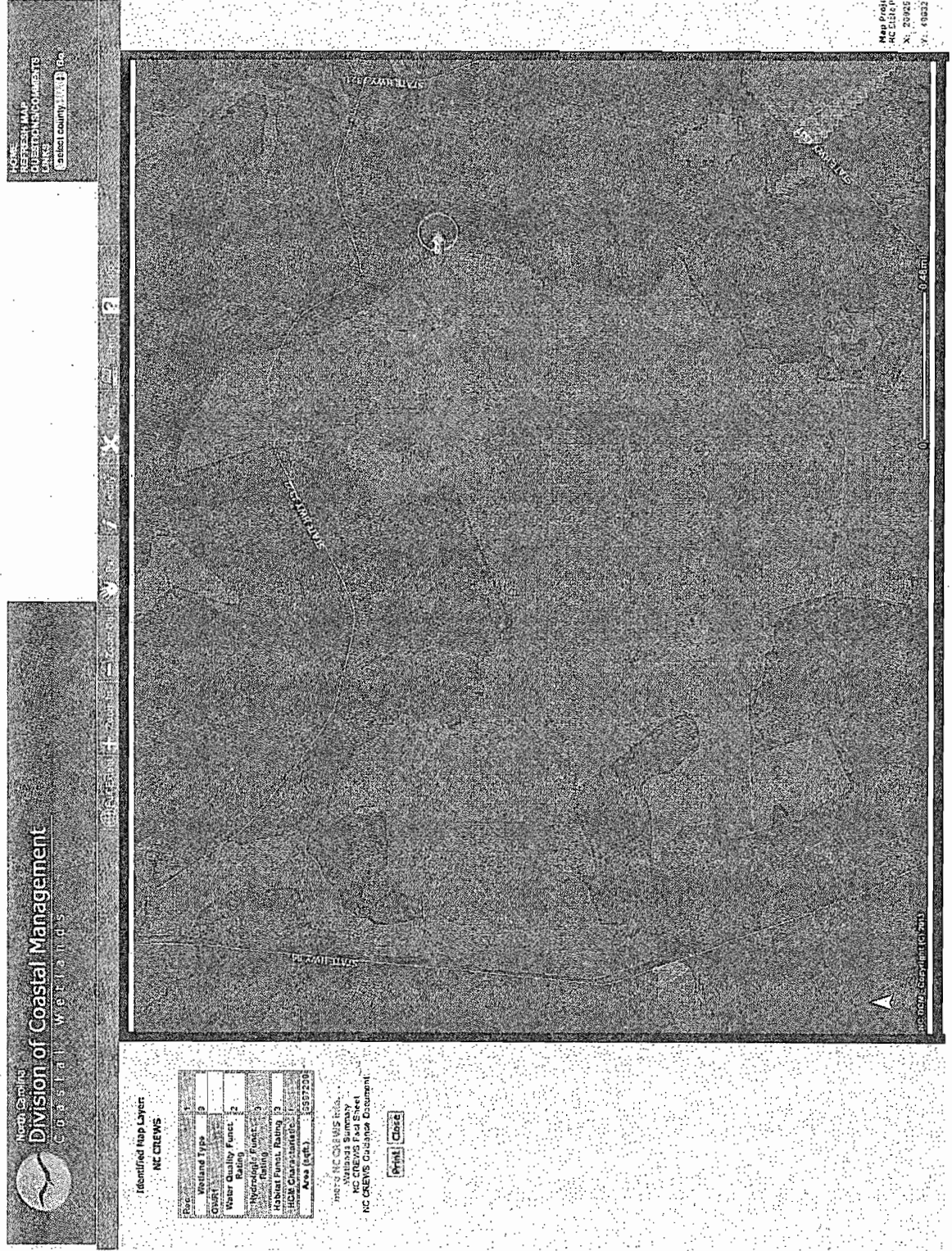


NCDCM - Copyright (c) 2013



# Hardwood Flat (w-type 9)

Poorly drained interstream flats not associated with rivers or estuaries. Seasonally saturated by a high water table or poor drainage. Species vary greatly but often include sweet gum and red maple.













Panllico

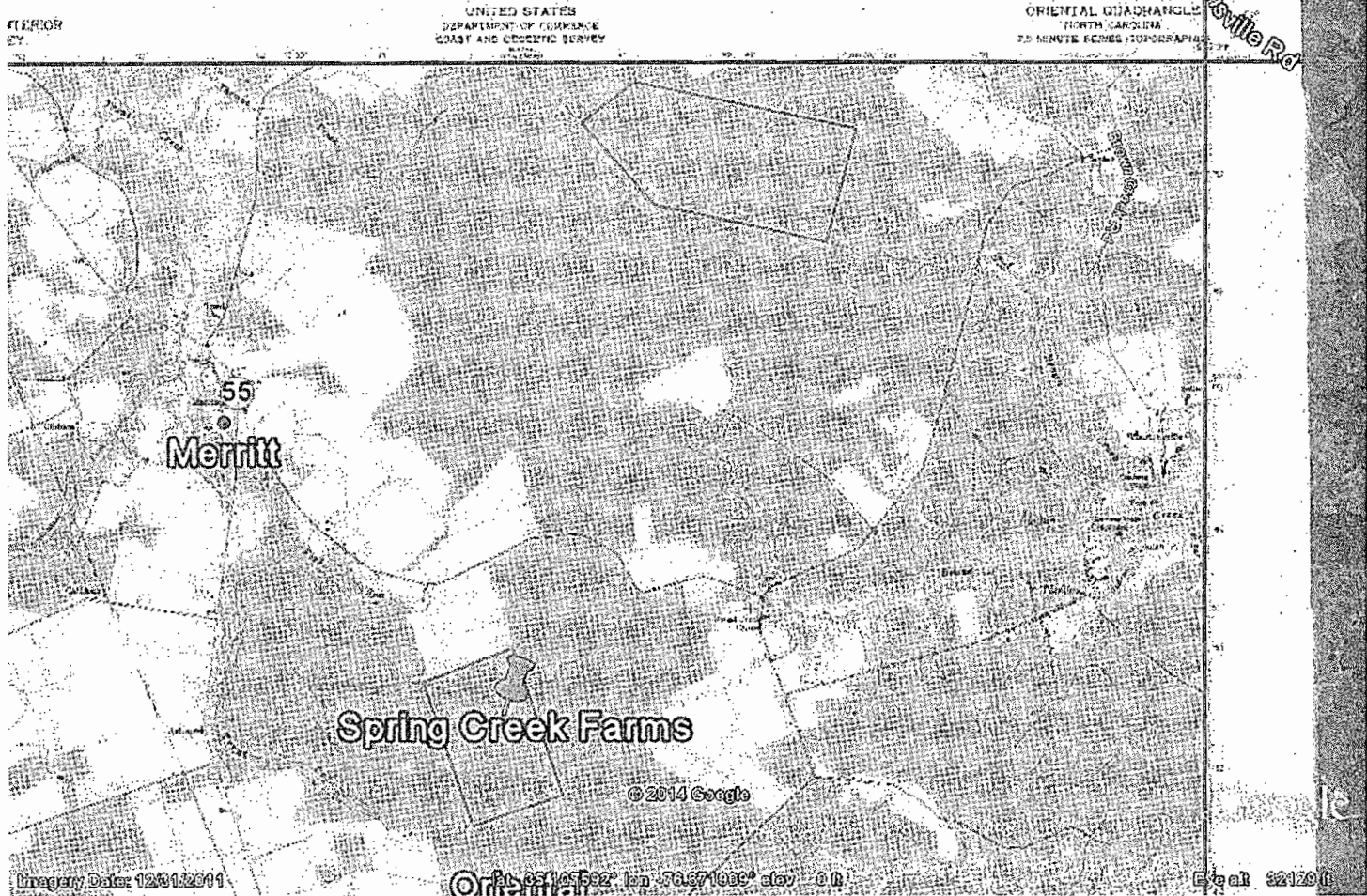


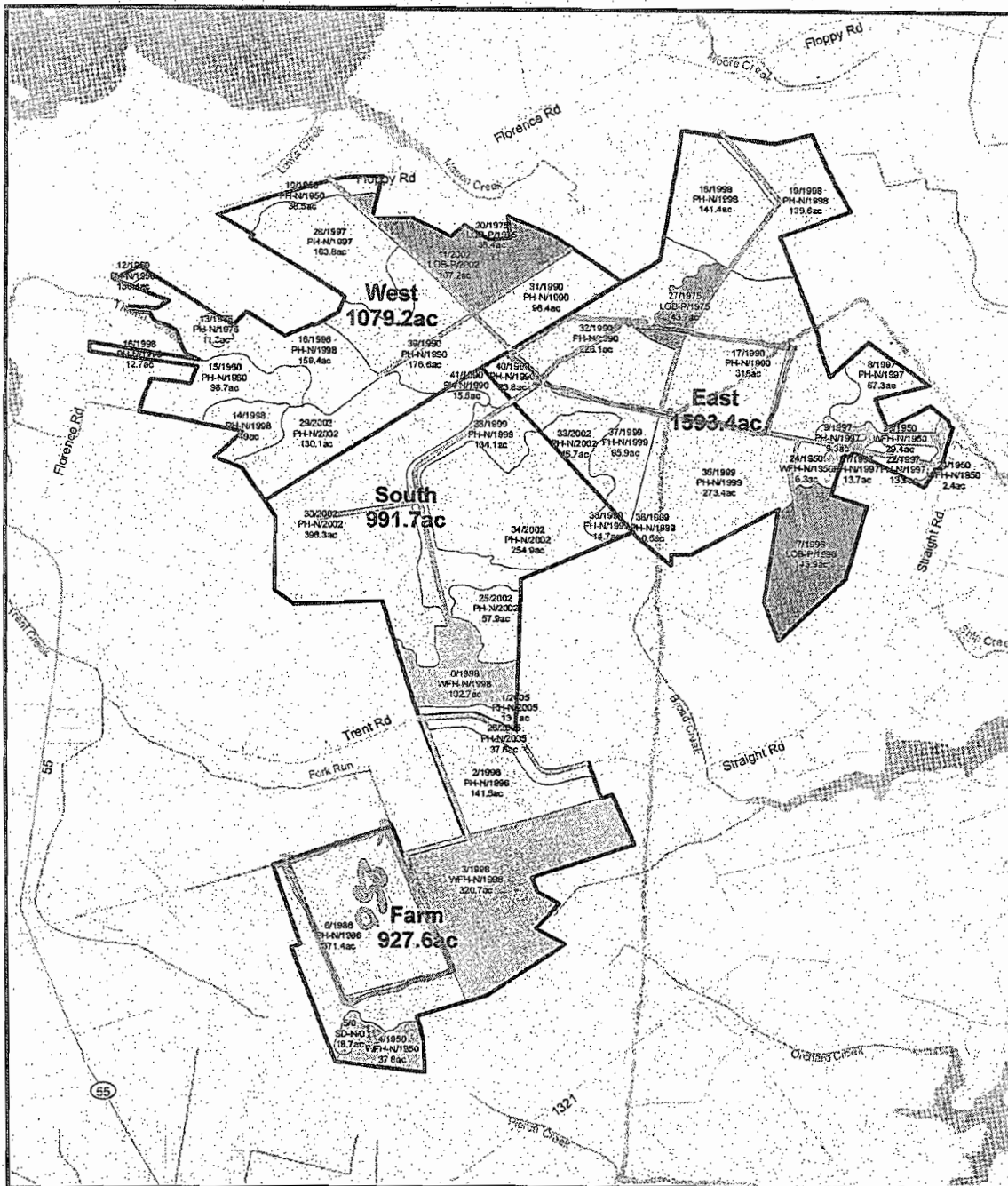


Imagery Date: 12/31/2011

lat: 35.17983, lon: -76.689606, alt: 0.0

Eye alt: 10769 ft





— Pamlico Roads

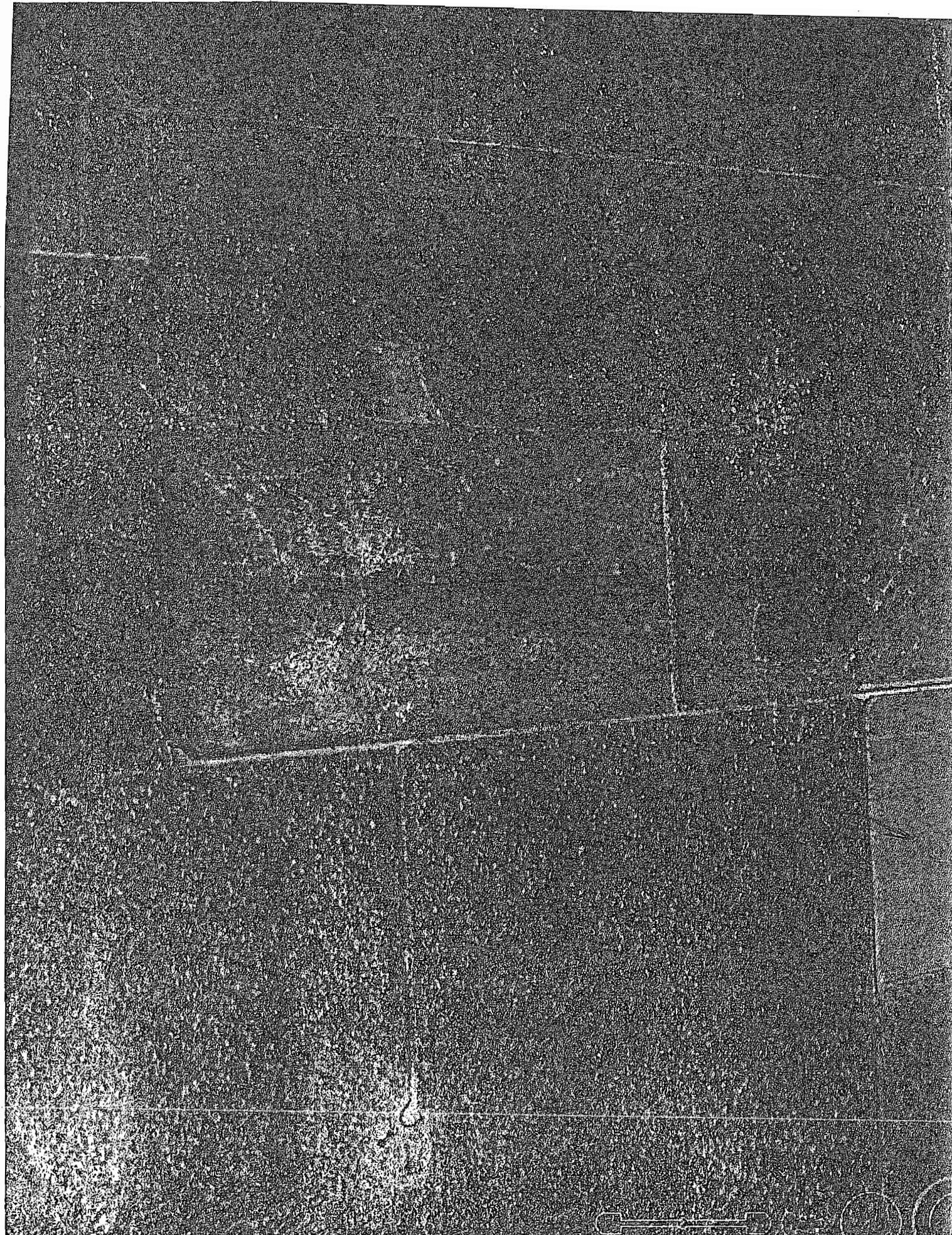
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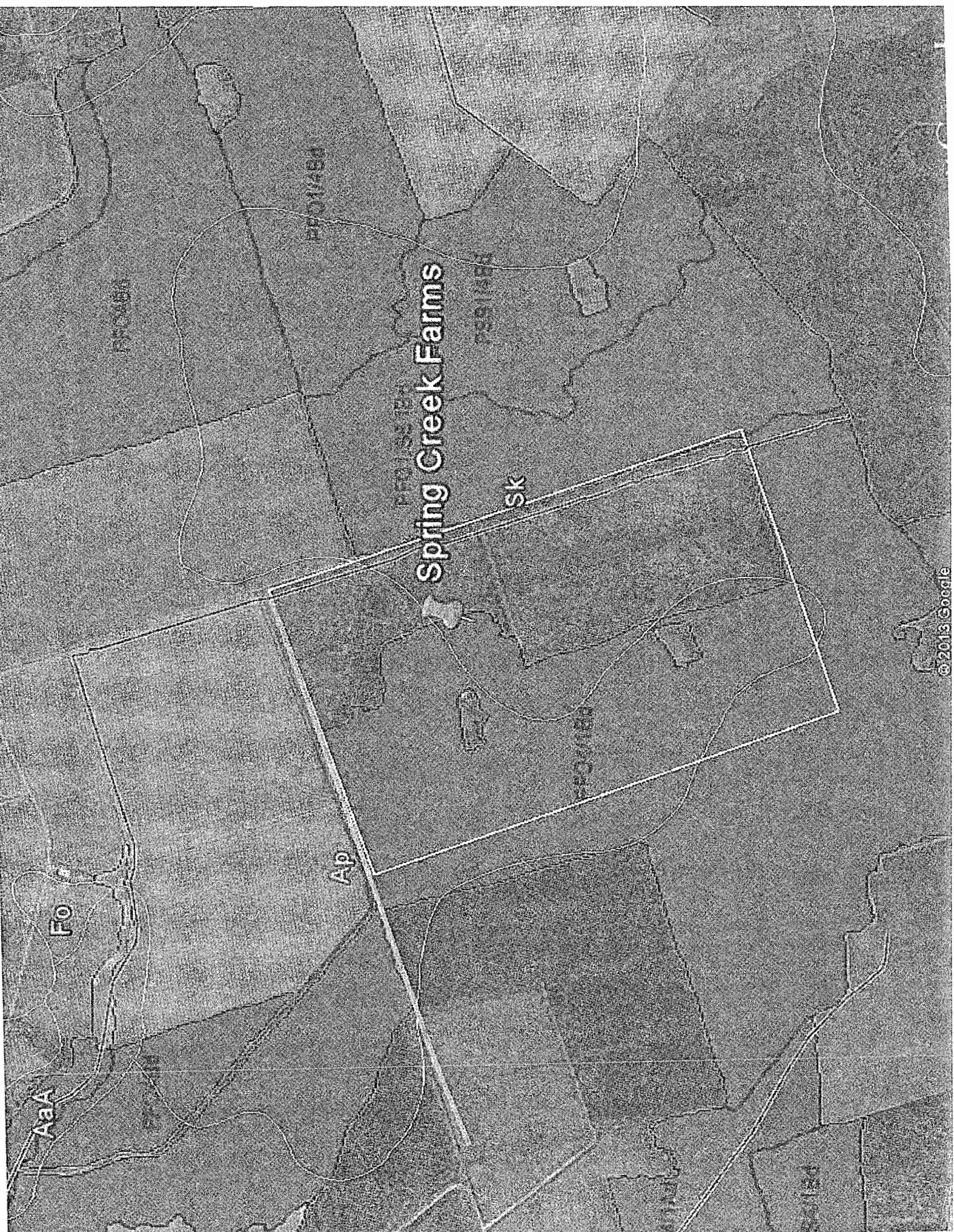
**Pamlico Tract**  
Pamlico County, NC  
+/- 4,591 acres

**COPPER  
STATION**  
PROPERTIES











Merrill

4

55

Spring Creek Farms, LLC Property

Image U.S. Geological Survey





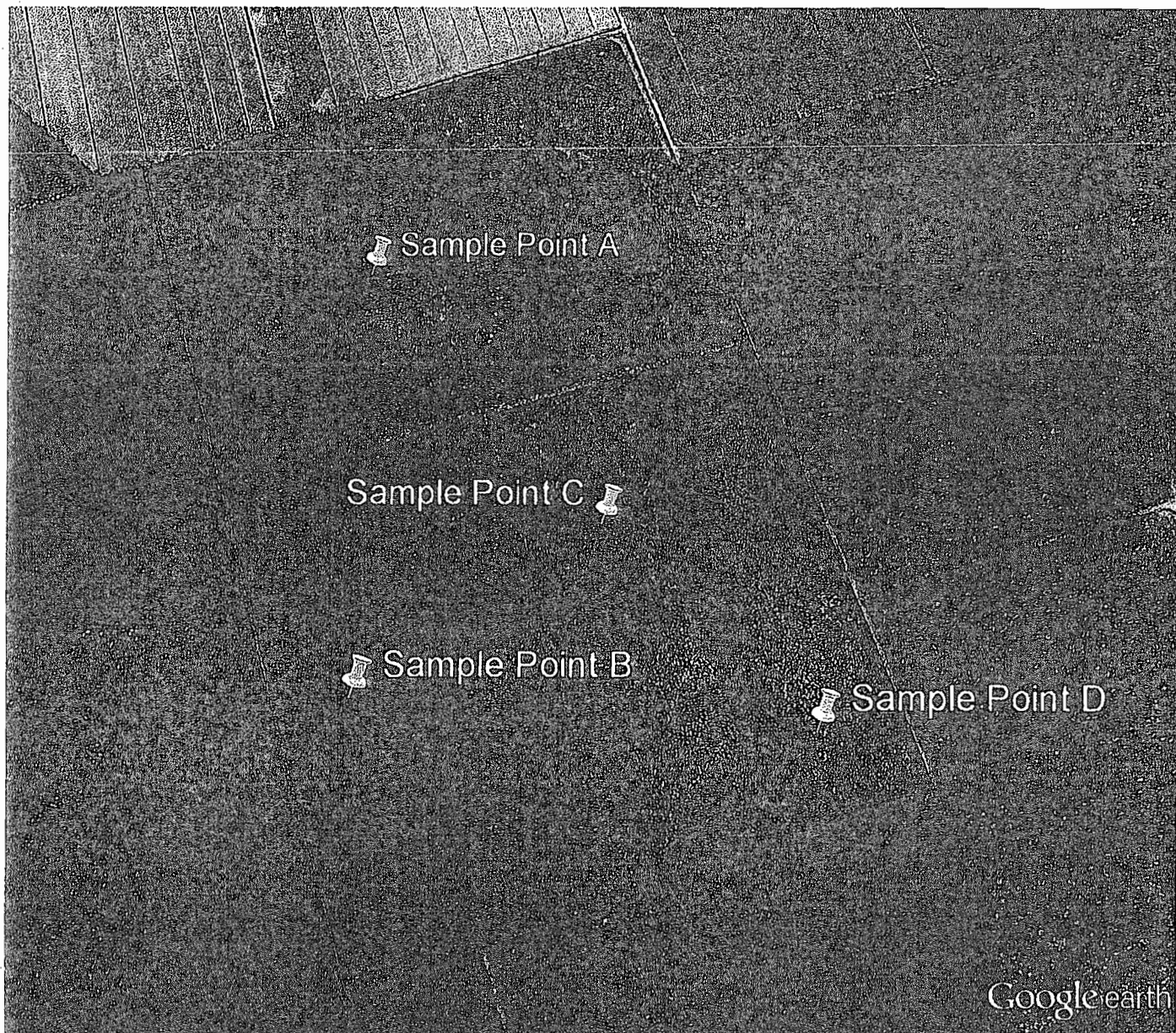


LEGEND		
SOIL SYMBOL	SOIL NAME AND CLASSIFICATION	GROUP OF SYMBOLS * HYDRO/HON-HYDRO
Aa	ALTAVISTA LOAMY SAND	NON-HYDRO
Ap	ARAPAHOE LOAMY FINE SAND	HYDRO
Ar	ARGENT LOAM	HYDRO
Ca	BALLAUGH FINE SANDY LOAM	HYDRO
Cu	CHARLESTON LOAMY FINE SAND	NON-HYDRO
Fs	FINE LOAMY FINE SAND	NON-HYDRO
Lf	LAITE LOAM	HYDRO
Ma	MADONTOON LOAM, FREQUENTLY FLOODED	HYDRO
St	STOCKADE LOAMY FINE SAND	HYDRO
Ts	TONGUE LOAMY FINE SAND	HYDRO

\* AS IN HYDRO SOILS OF THE UNITED STATES, U.S.D.A. SOIL CONSERVATION SERVICE, 1978



SOILS	
FORD BALTIMORE ORIENTAL	
MADE AS PER: APPROVED BY:	DRAWN BY: TLJ
DATE: 01/25/87	FILE: 2118-SOILS
	CP#2118.00
FIGURE 1	

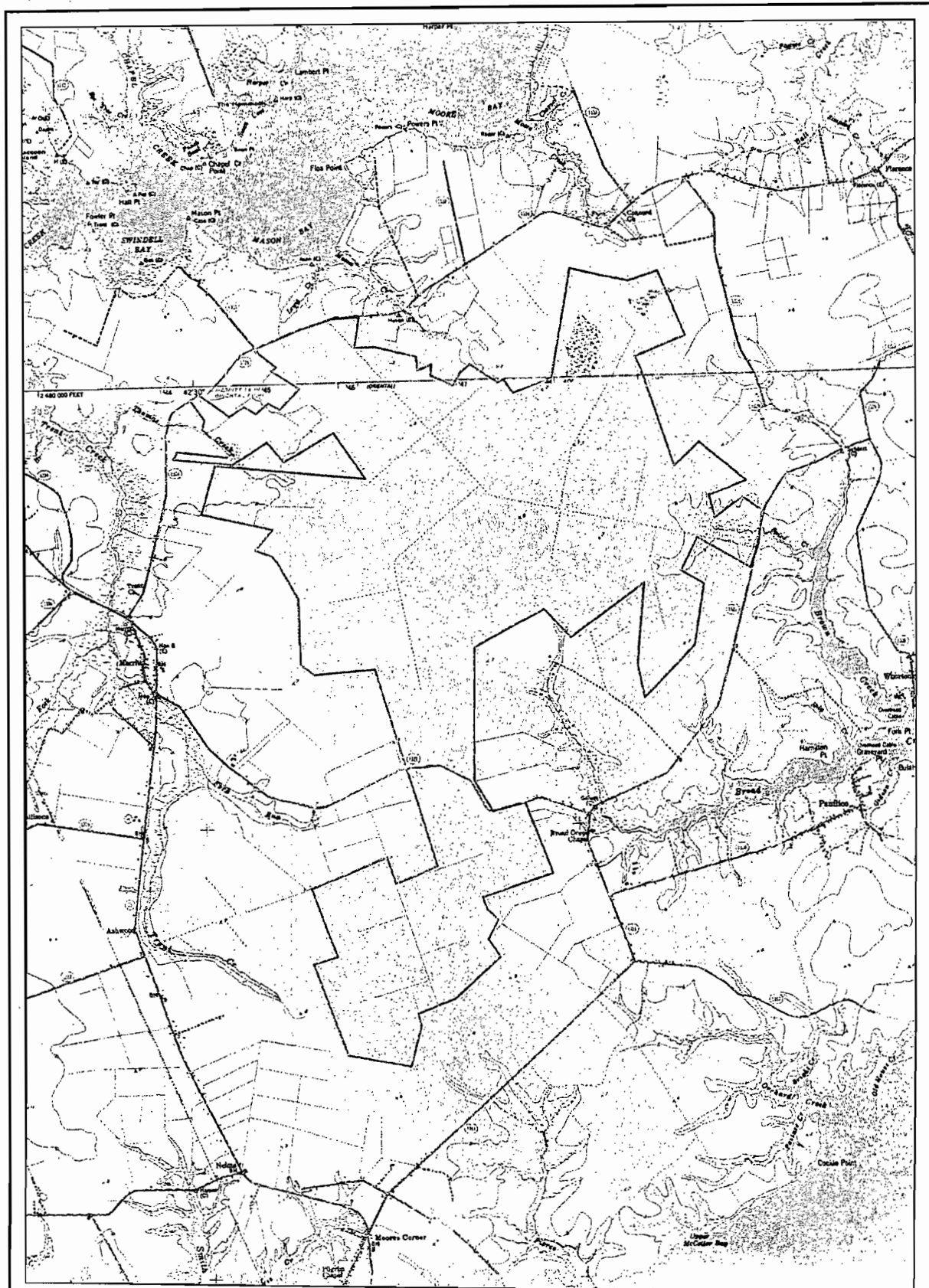


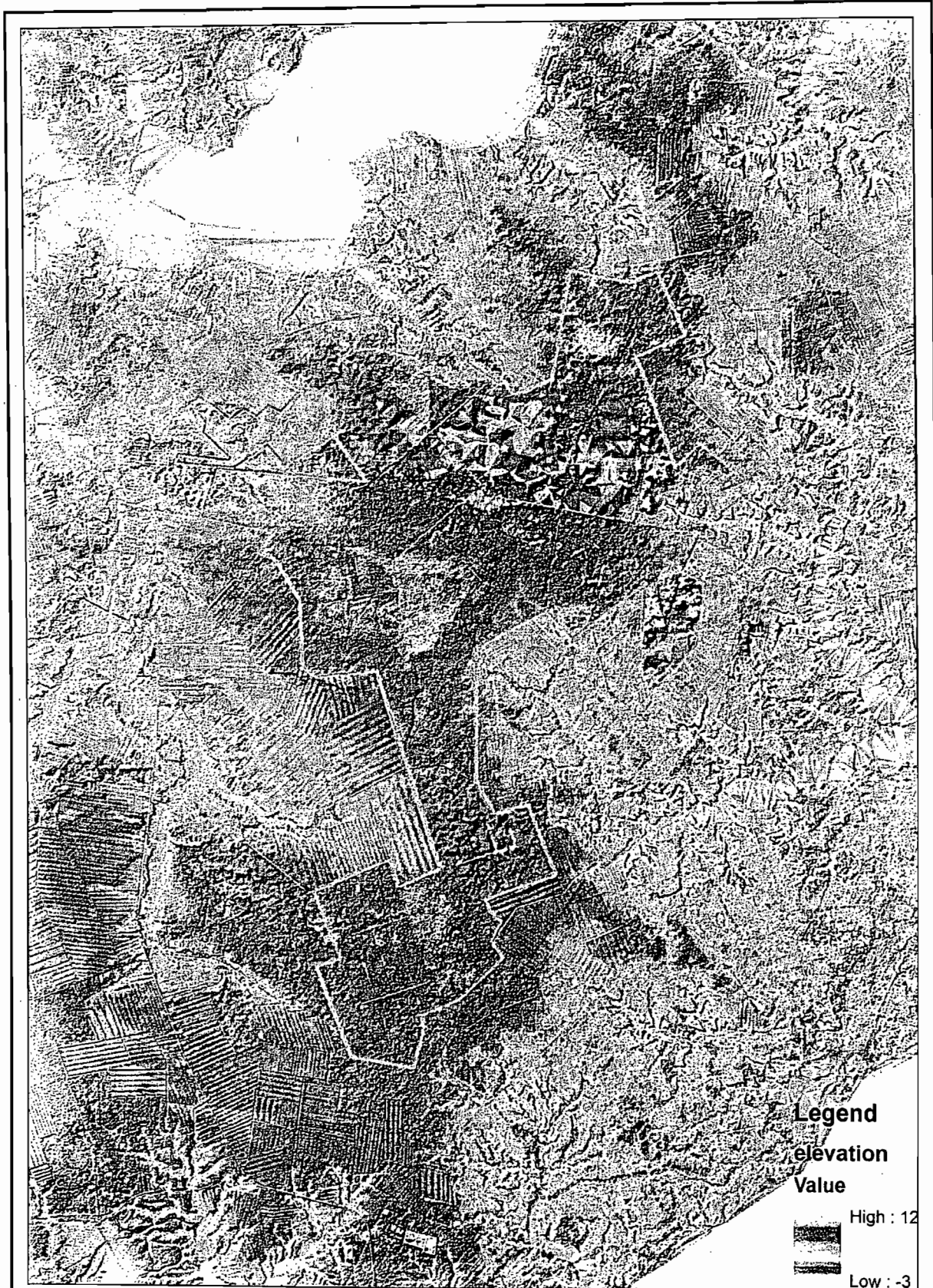
Google Earth Pro

feet 2000  
meters 600

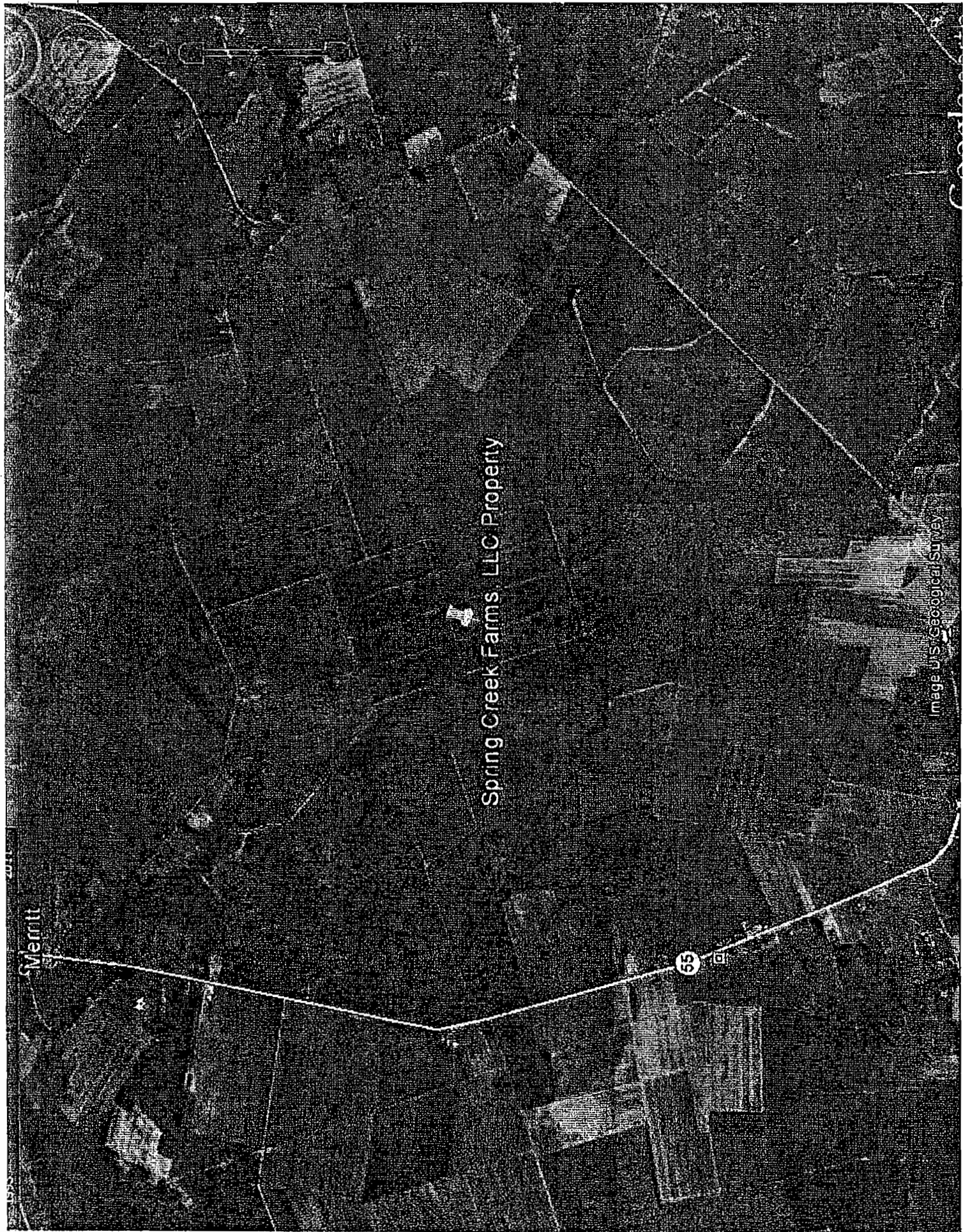












Spring Creek Farms, LLC Property

Image U.S. Geological Survey

Florence Rd

Merritt O Merritt

Spring Creek Farms

© 2013 Google  
Oriental

35

Cutover Wetland (w-type 61-77)  
 Areas for which satellite imagery indicates a lack of vegetation in 1994. These areas are likely to still be wetlands, however, they have been recently cut over. The vegetation in cutover areas may be regenerating naturally, or the area may in use for silvicultural activities.



North Carolina  
 Division of Coastal Management  
 Coastal Wetlands

Standard Map Layer:  
 NC OWLWS

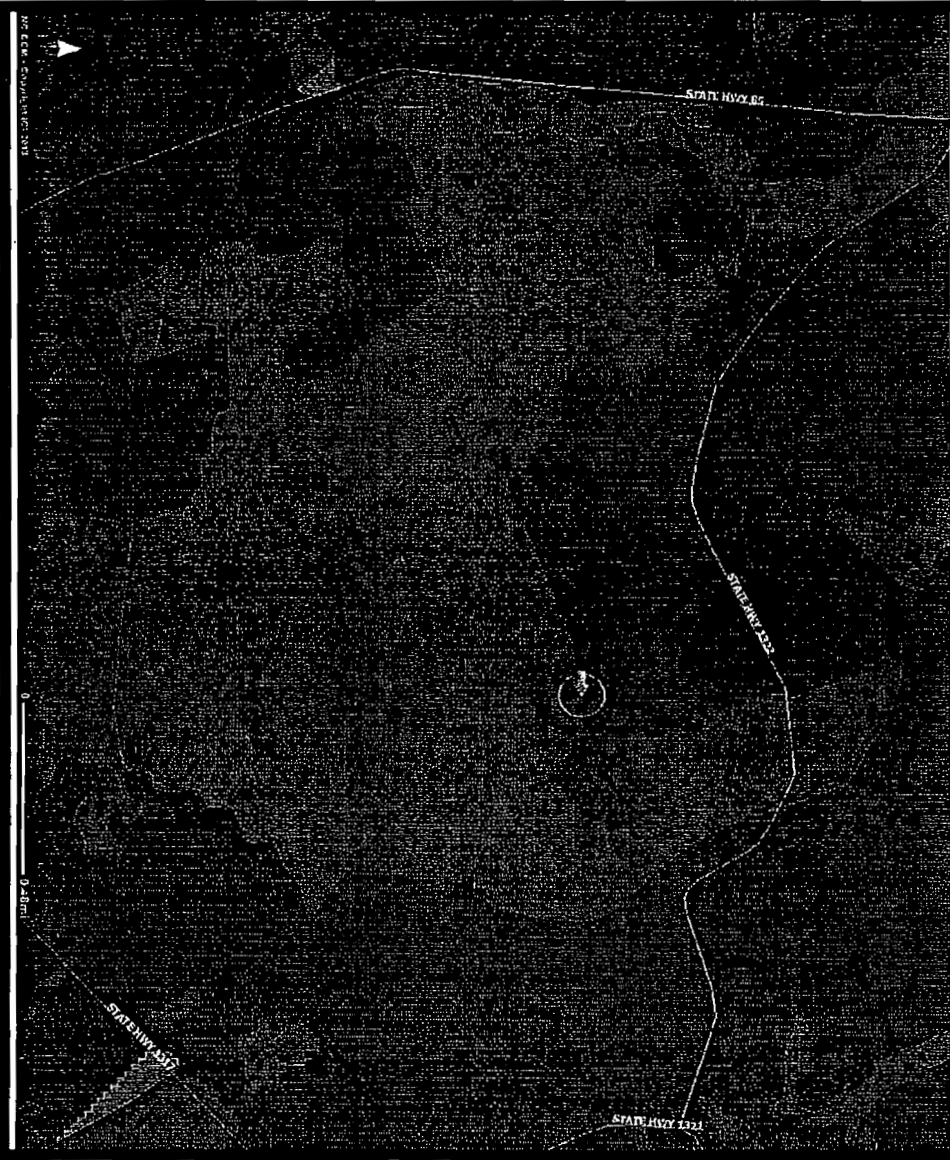
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Wetland Code	61
Wetland Name	Wetland
Wetland Area	1
Wetland Date	1/1/1994
Wetland Status	1
Wetland Type	61
Wetland Code	61
Wetland Name	Wetland
Wetland Area	1
Wetland Date	1/1/1994
Wetland Status	1

North NC OWLWS Code...  
 Wetland Status...  
 NC OWLWS Code...  
 NC OWLWS Code...  
 NC OWLWS Code...

Full Close

Full Extent Zoom In Zoom Out Map Library Change Print Help

Home  
 Refresh Map  
 Questions/Comments  
 Links  
 Data County Data



MS ECR - Coastal Wetlands

MS ECR  
 MS ECR  
 MS ECR  
 MS ECR



Poorly drained interstream flats not associated with rivers or estuaries. Seasonally saturated by a high water table or poor drainage. Species vary greatly but often include sweet gum and red maple.

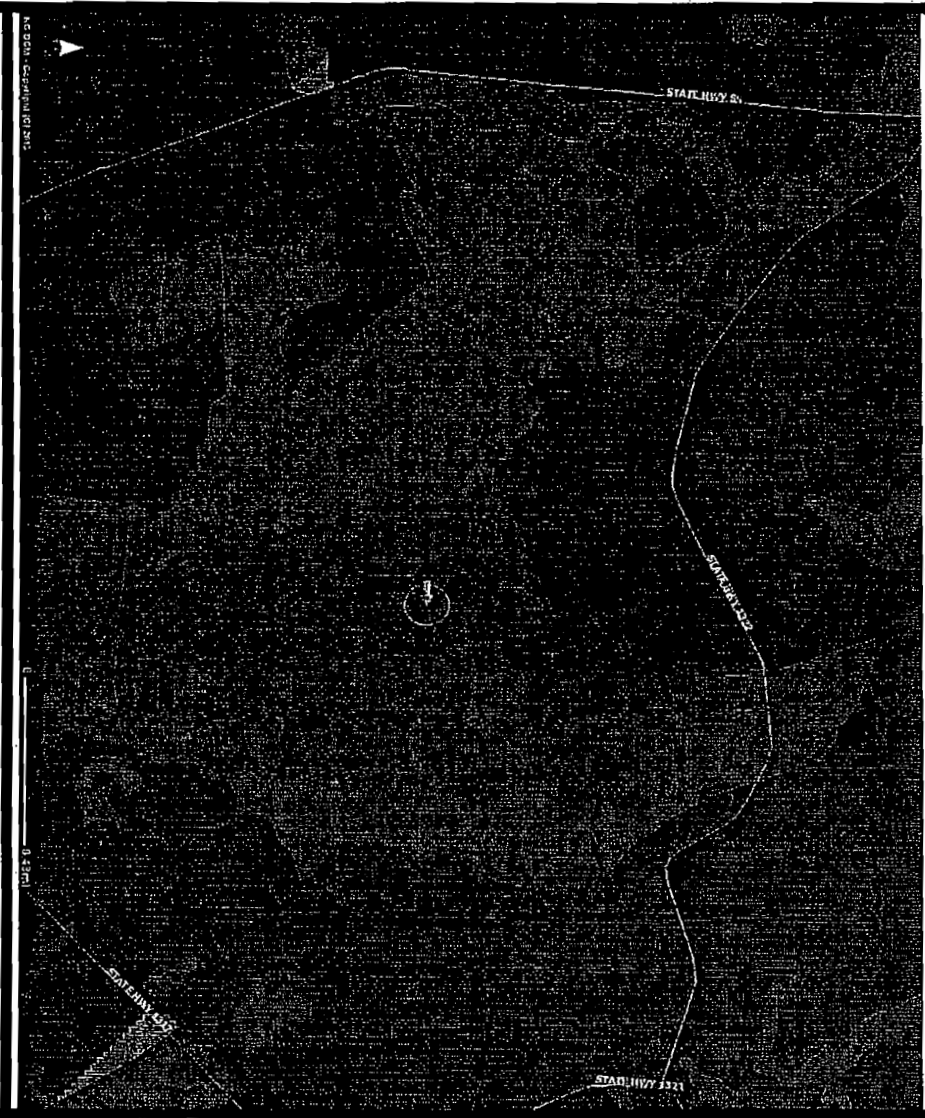


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HOME  
REFRESH MAP  
QUESTIONS/COMMENTS  
LINKS

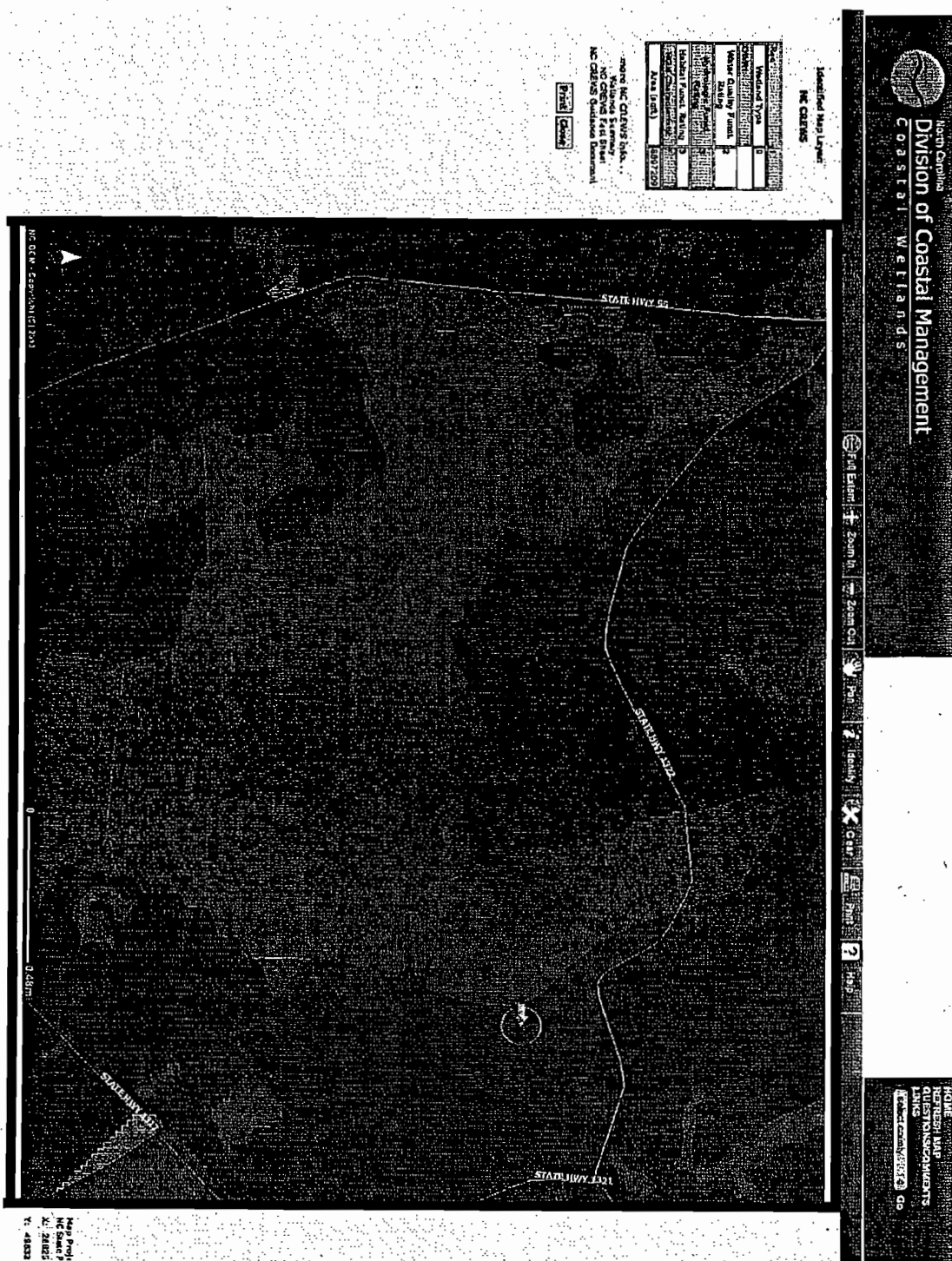
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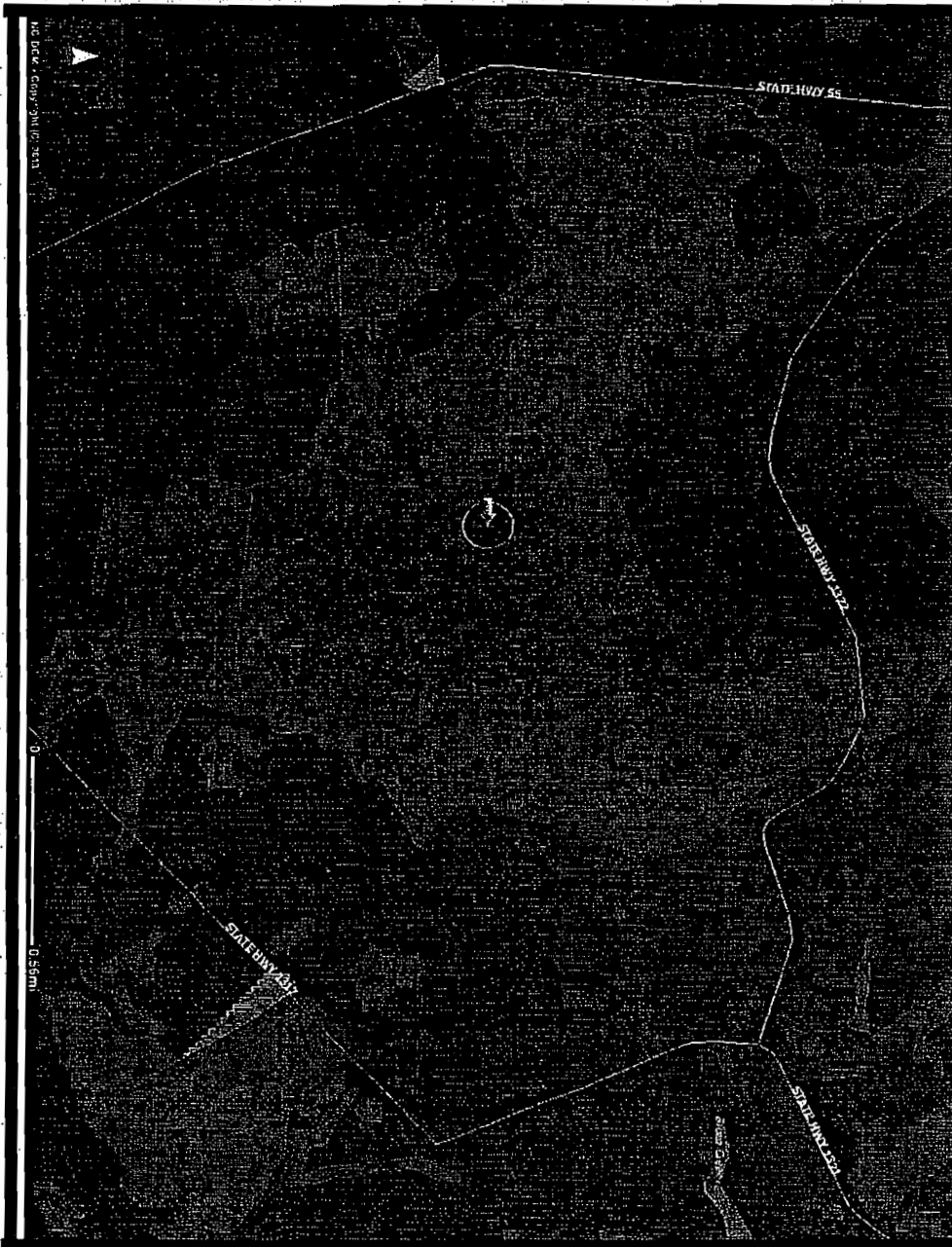
PREPARE MC CREW'S INFO. \*\*  
Virtuade Pharmacy  
MC CREW'S Flat Sheet  
MC CREW's Quilted Linen Duvet Cover



```
Map1
MC54
X: 21
Y: 46
```

Hardwood Flat (w-type 9)  
 Poorly drained interstream flats not associated with rivers or estuaries. Seasonally saturated by a high water table or poor drainage. Species vary greatly but often include sweet gum and red maple.



[illegible]

MC BCK - Copy - 9/10/2011

0.56 mi

Y. X. Zh.

[HOME](#) [ABOUT](#) [CONTACT](#) [FAQ](#) [RESEARCH](#) [RESEARCH MAP](#) [QUESTIONS/COMMENTS](#) [LINKS](#)





North Carolina  
Division of Coastal Management  
Coastal Wetlands

Scale: 1:250,000



HOME  
RETURN MAP  
DISCUSSION COMMENTS  
LINKS  
[Backcountry/Map] Go

LEGEND & LAYER LIST

- ☒ All Map Layers
- ☒ Wetlands
- ☒ Coastal Wetlands
- ☒ Restoration and Enhancement Ponds
- ☒ NC CREWS
- ☒ BASE MAP
- ☒ Stream - Den
- ☒ 2003 Fields

Release Map

Glenn Kretsch

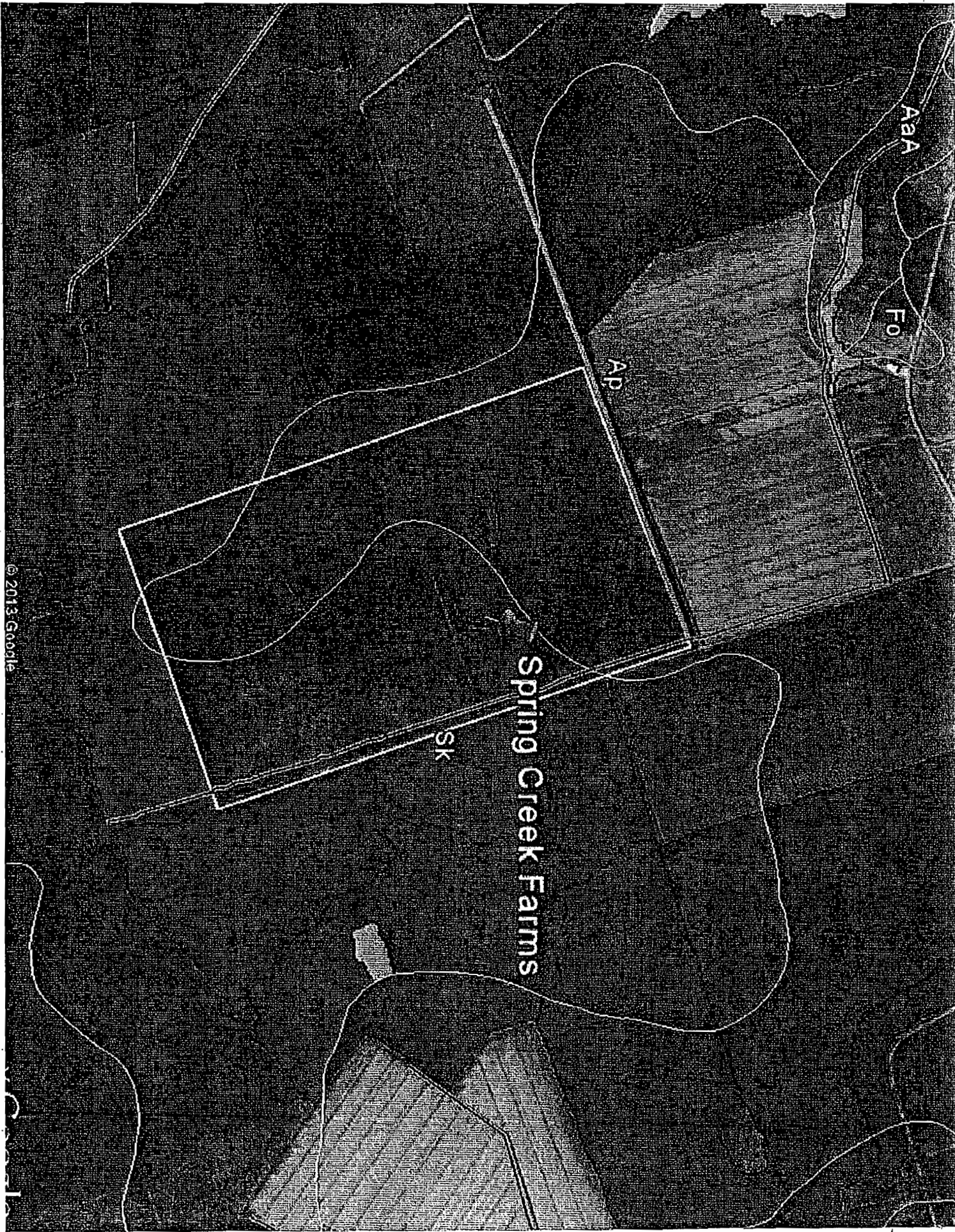
Copyright © 2007  
Last Update: 04/03/2007



NC 254 - COASTAL WETLANDS

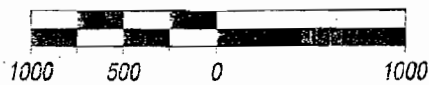
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Map Date: 04/03/2007  
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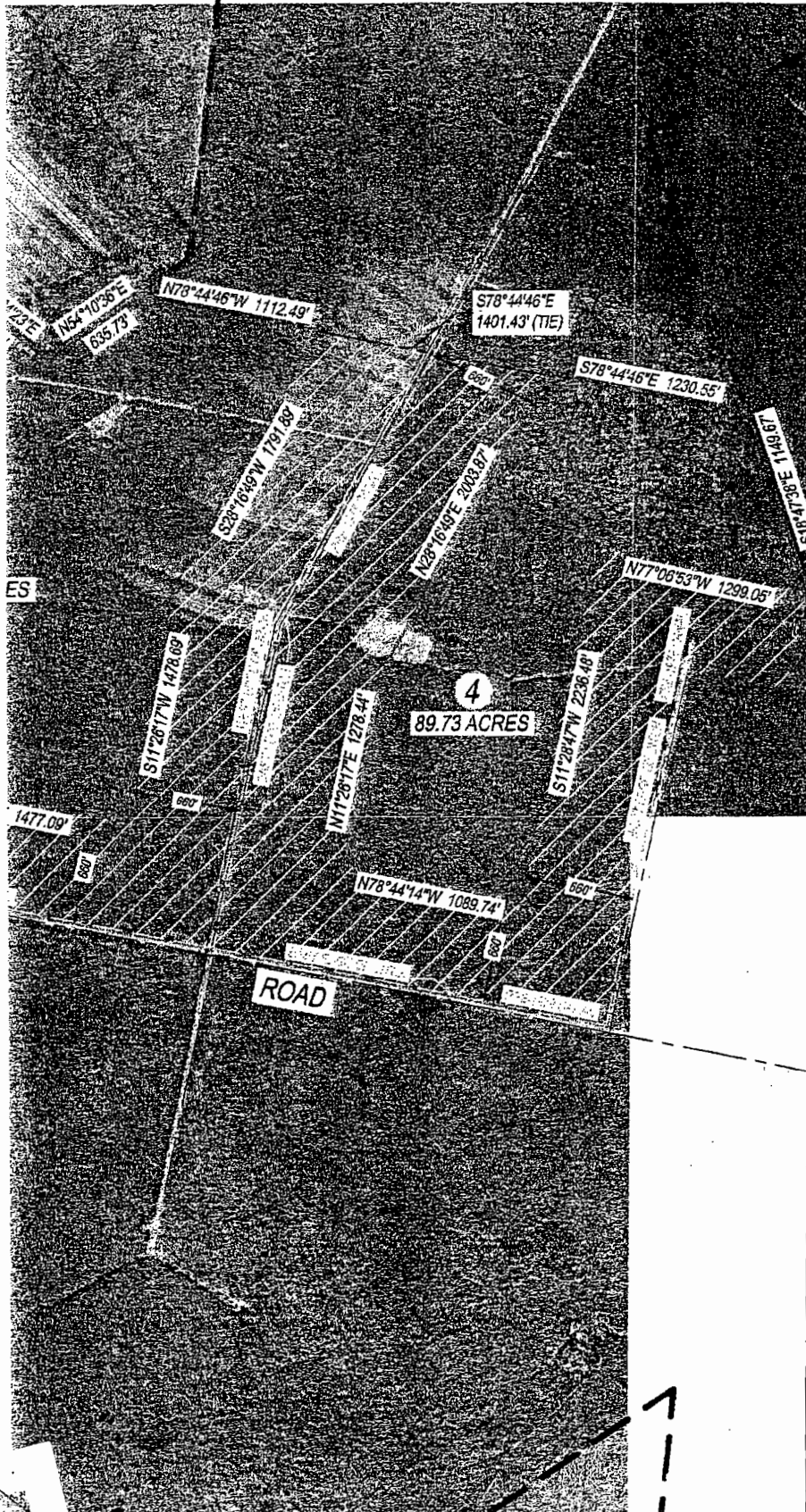
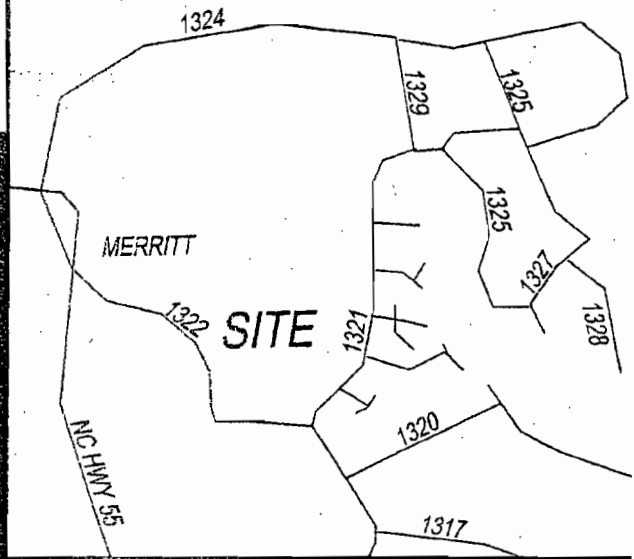




# GRAPHIC SCALE



# VICINITY SKETCH



I, HERBERT J. NOBLES, JR., CERTIFY THAT THIS PLAT WAS DRAWN BY ME FROM AN ACTUAL SURVEY MADE BY ME BEING A PORTION OF A TRACT DESCRIBED IN DEED BOOK 582 AT PAGE 634 RECORDED IN THE OFFICE OF THE PAMLICO COUNTY REGISTER OF DEEDS. THIS MAP WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL, THIS \_\_\_\_ DAY OF \_\_\_\_, 2014.

PROFESSIONAL LAND SURVEYOR

## LEGEND

- OVERALL PROJECT BOUNDARY
- AREAS OF POSSIBLE CONCERN
- DELINEATED UPLAND BY CORPS
- DITCH CANALS - PRIOR TO 1978
- ROADWAY CENTERLINES
- CANAL MINIMUM ZONE OF INFLUENCE

SURVEYED FOR  
SPRING CREEK FARMS, LLC

## PROJECT AREA MAP

A PORTION OF A TRACT OWNED BY SPRING CREEK FARMS, LLC, DESCRIBED IN DEED BOOK 582 PAGE 634

NO. 2 TWP. PAMLICO COUNTY NORTH CAROLINA

HERBERT J. NOBLES, JR.

PROFESSIONAL LAND SURVEYOR - L-2703

186 CAMPEN ROAD BAYBORO, NORTH CAROLINA 28515  
(252) 671-3171

SCALE: 1" = 1000'

PROJECT NO. 2013-20

DATE: 05-27-14

PLOT NAME: 11PLAND

SHEET 1 OF 2

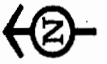


Pamlico County, NC

# PROPERTY MAP



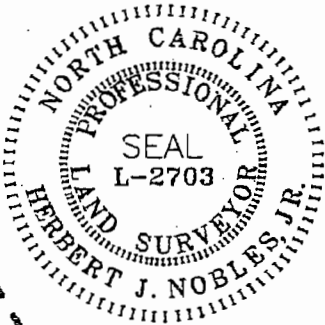
**Disclaimer:**  
The data provided on this map are prepared for the inventory of real property found within Pamlico County, NC and are compiled from recorded plats, deeds, and other public records and data. This data is for informational purposes only and should not be substituted for a true title search, property appraisal, survey, or for zoning verification.



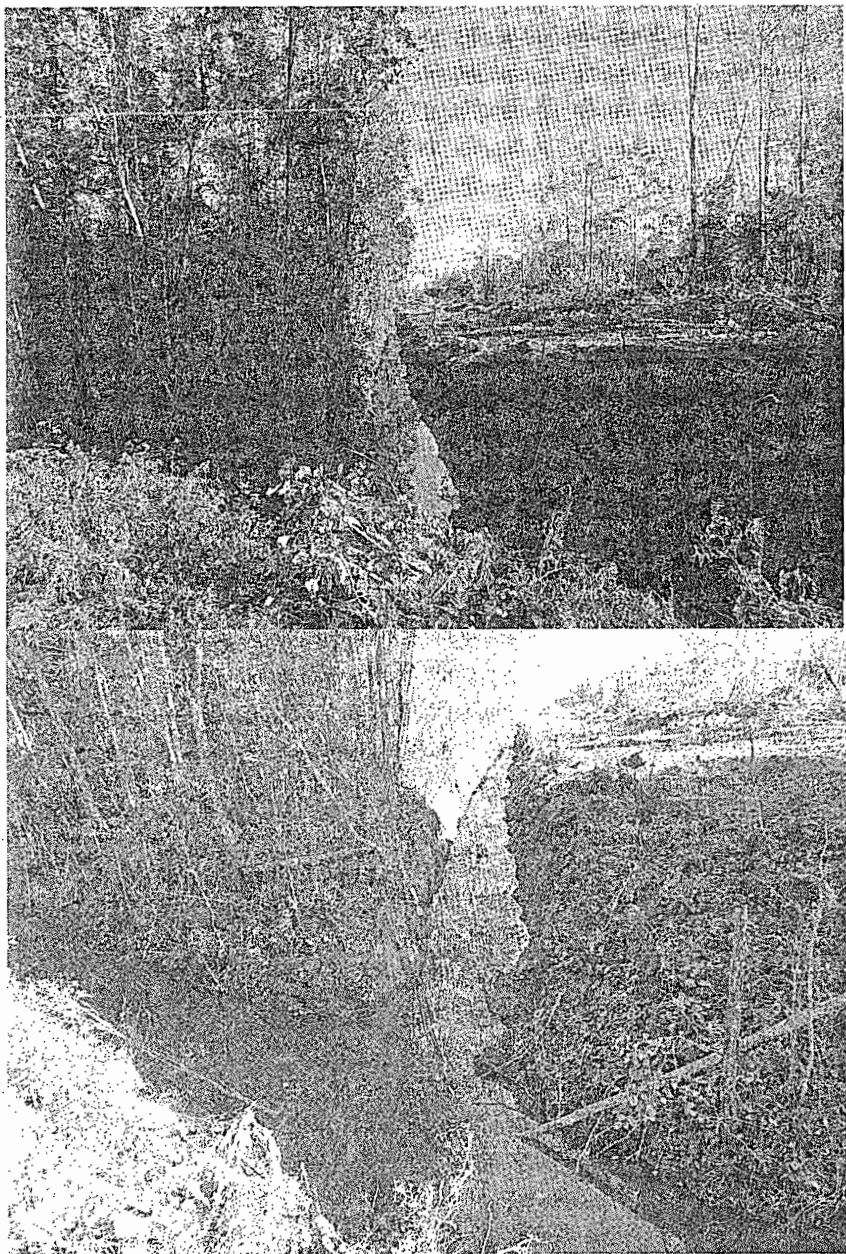
One Inch = 1600 Feet

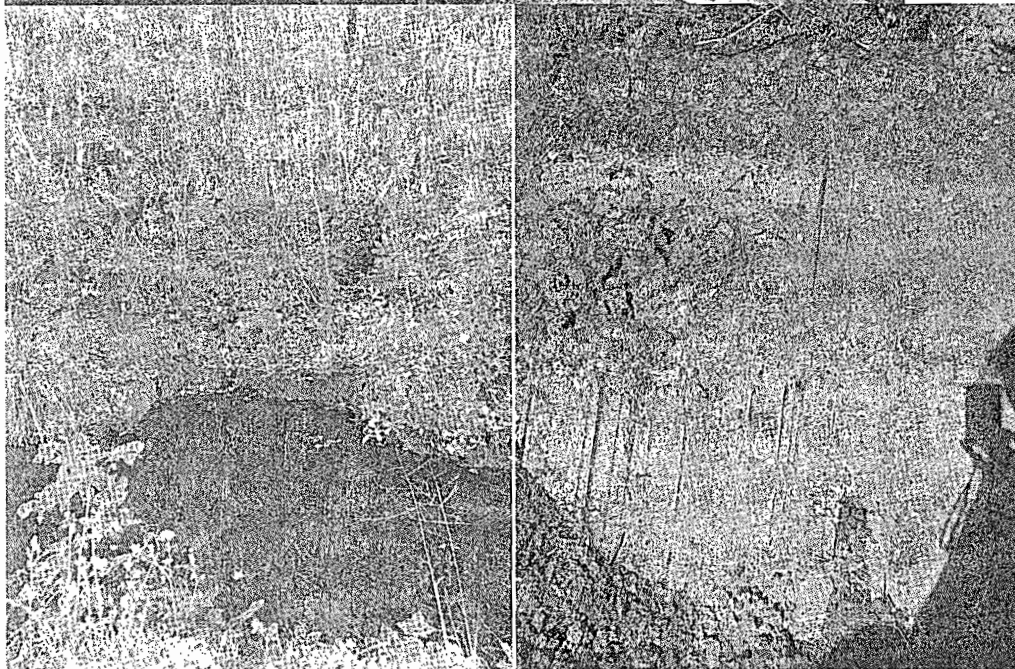


FLORENCE ROAD



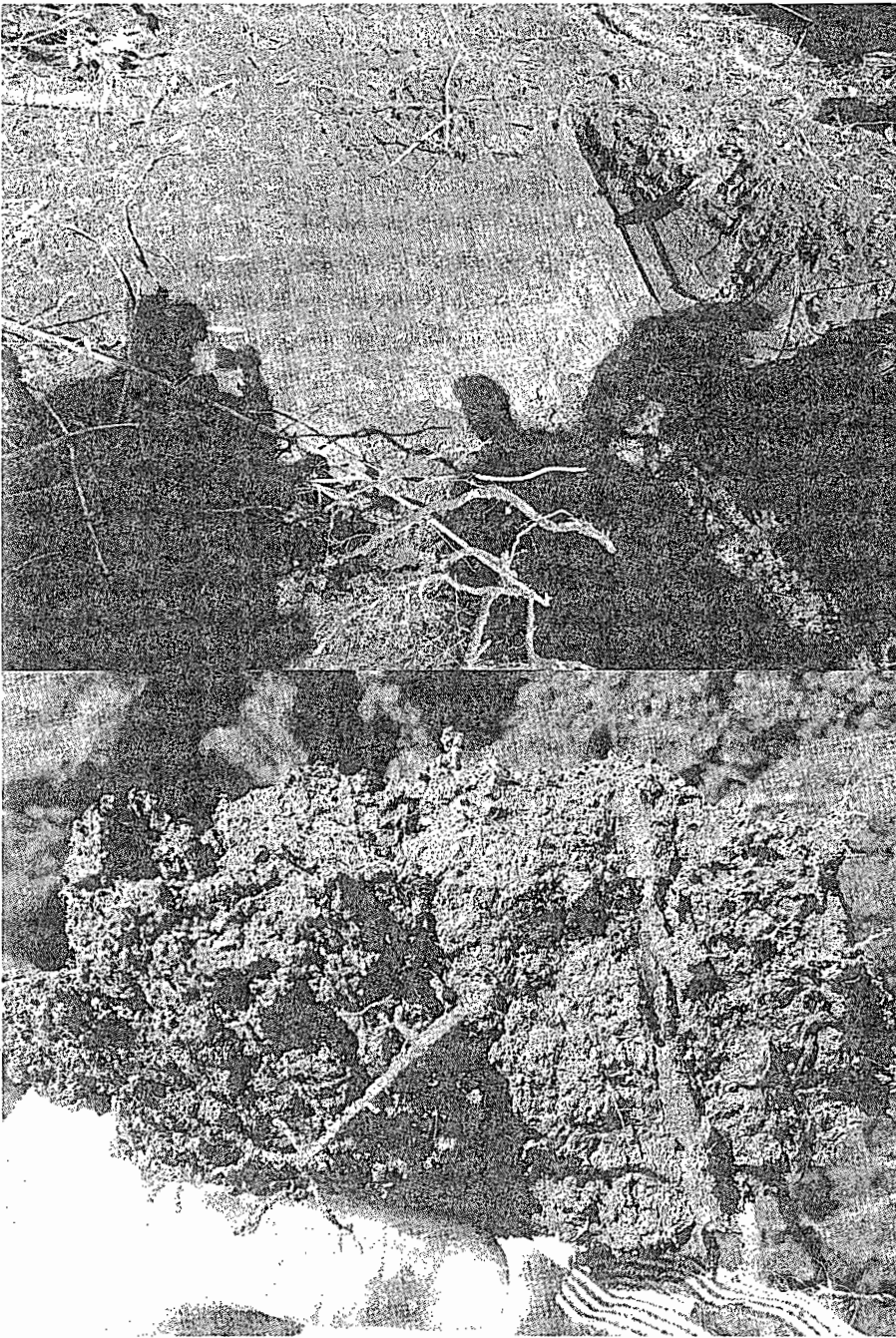


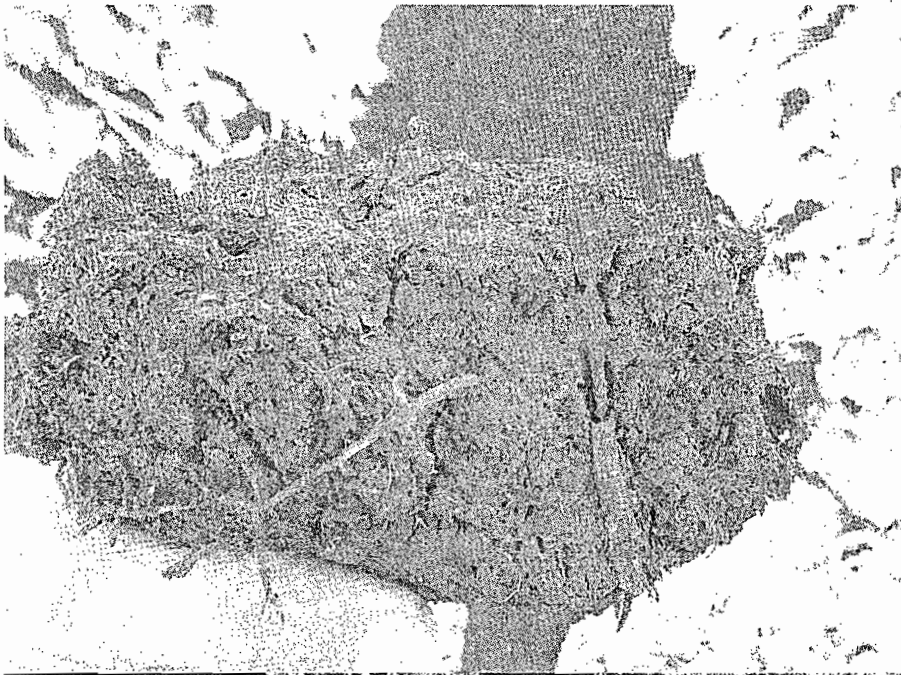


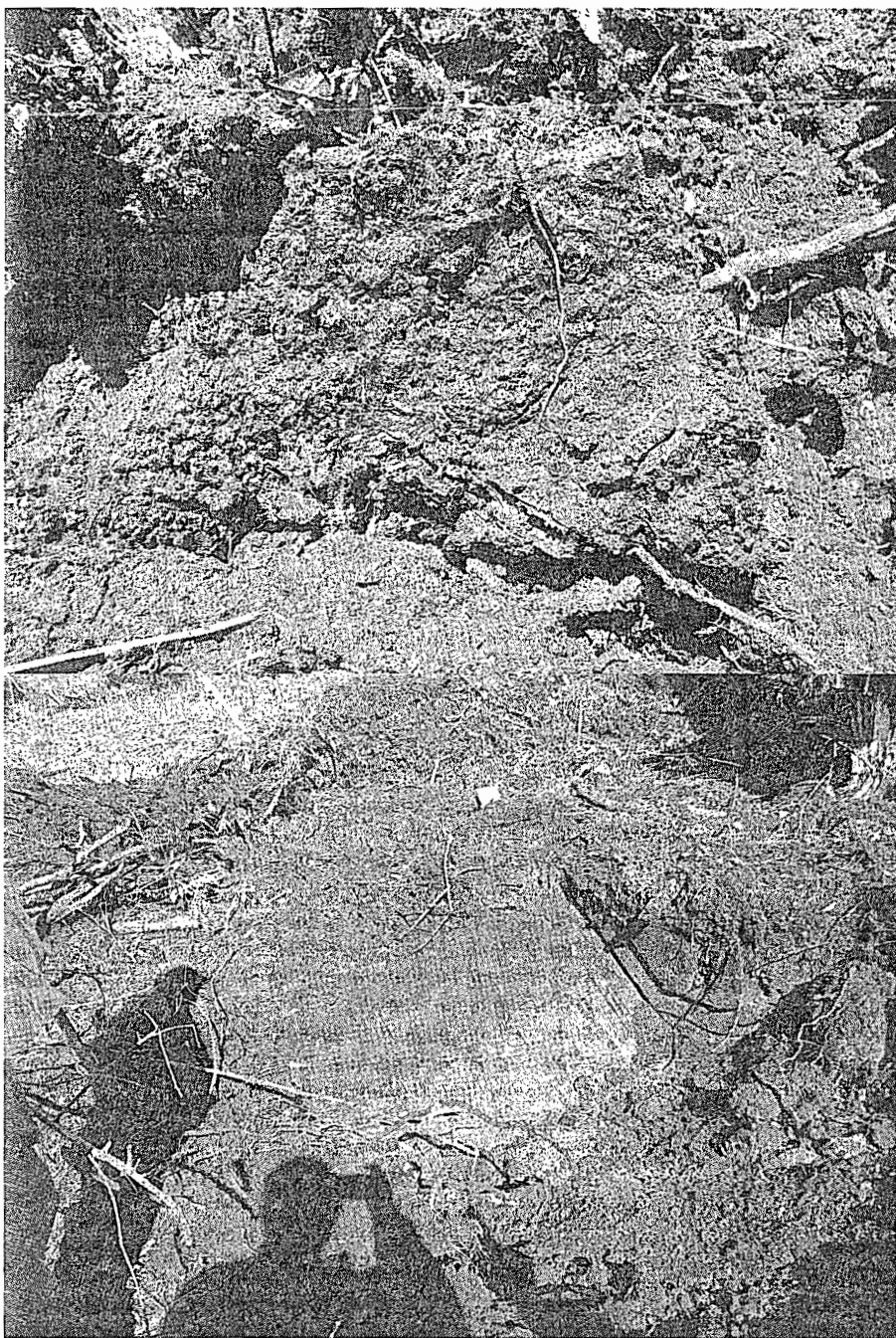




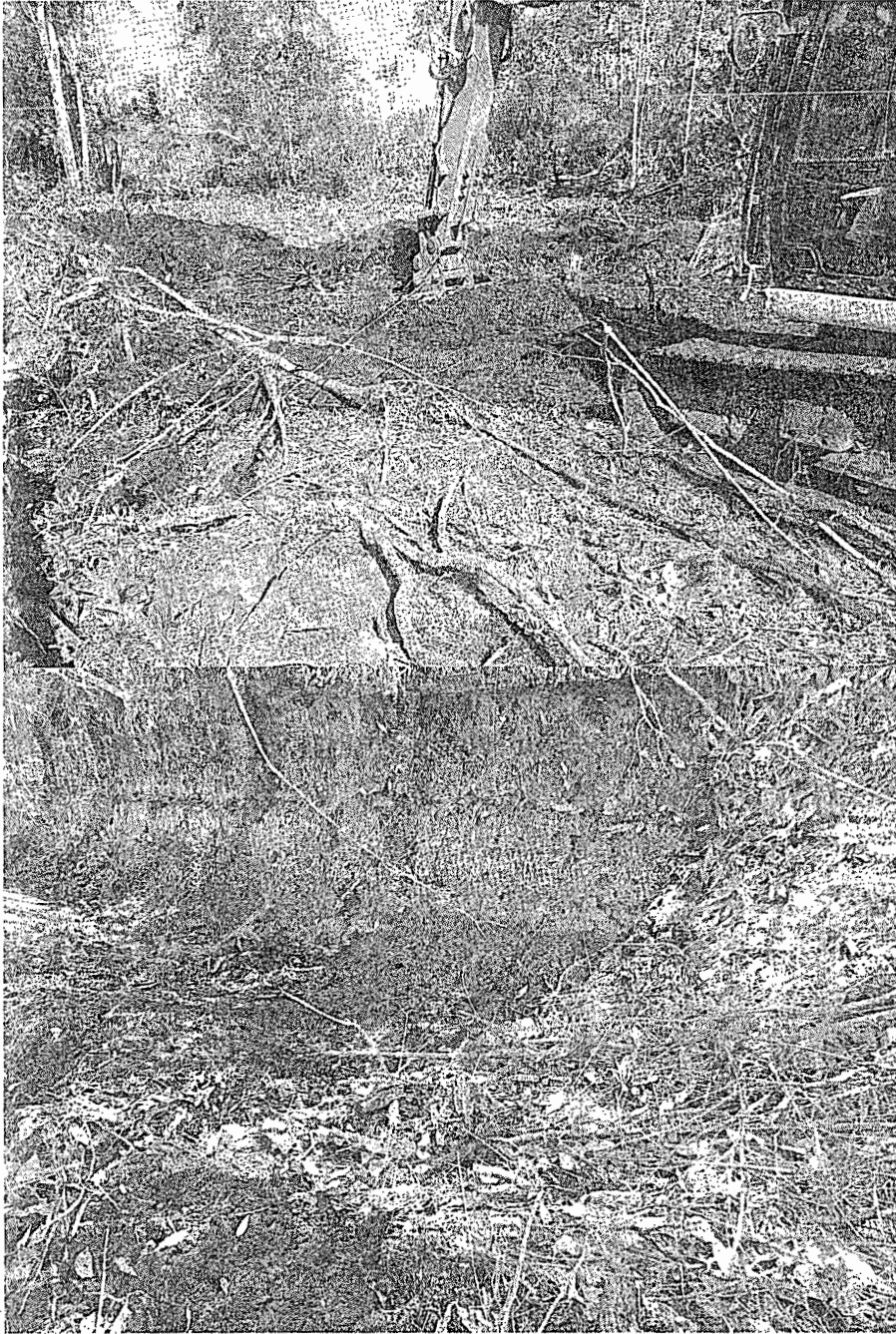


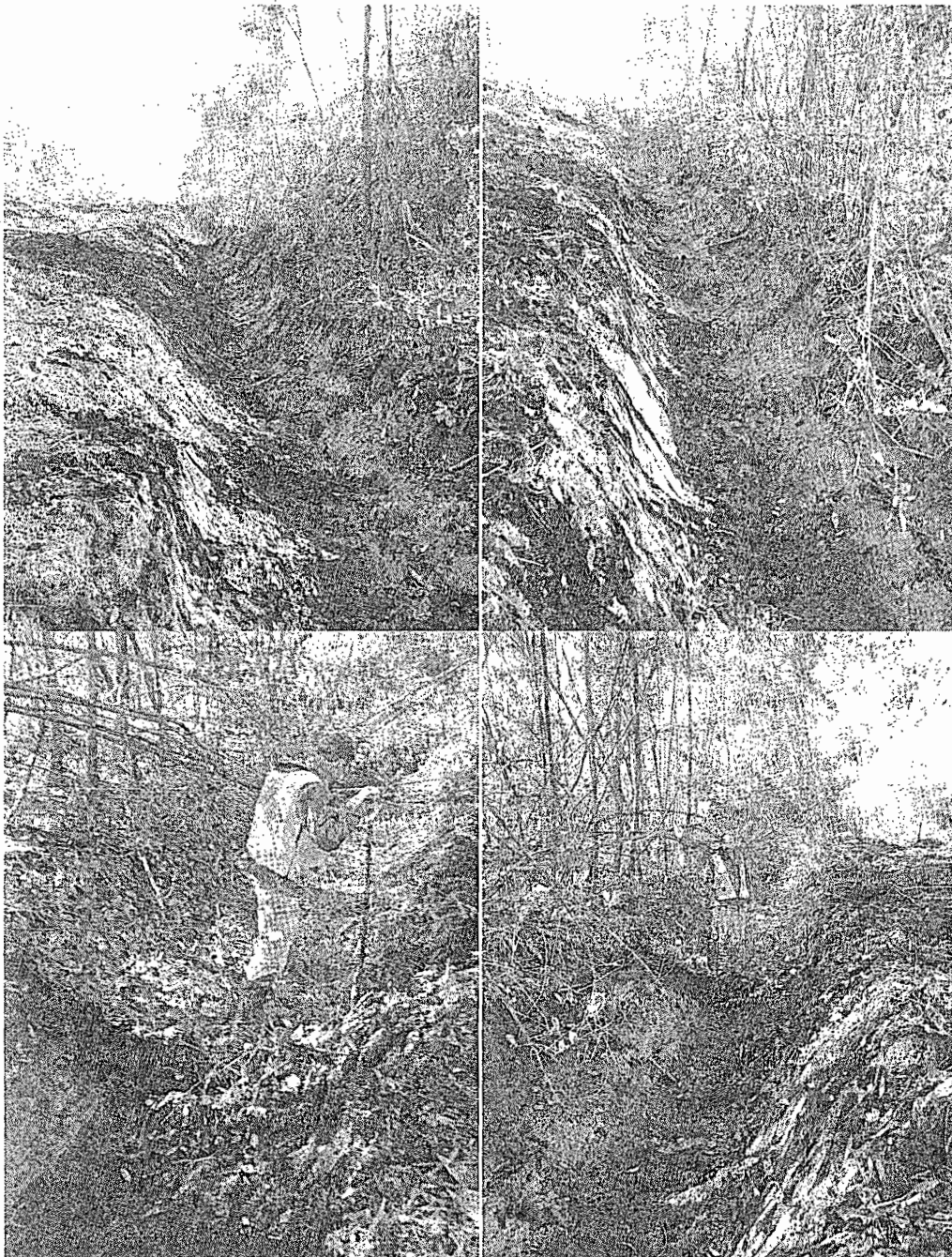


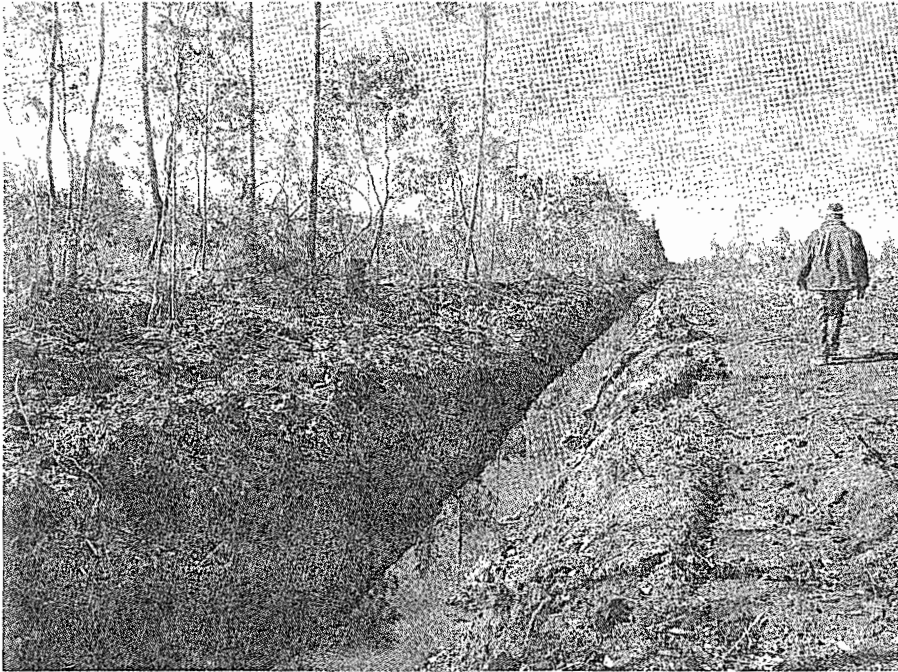




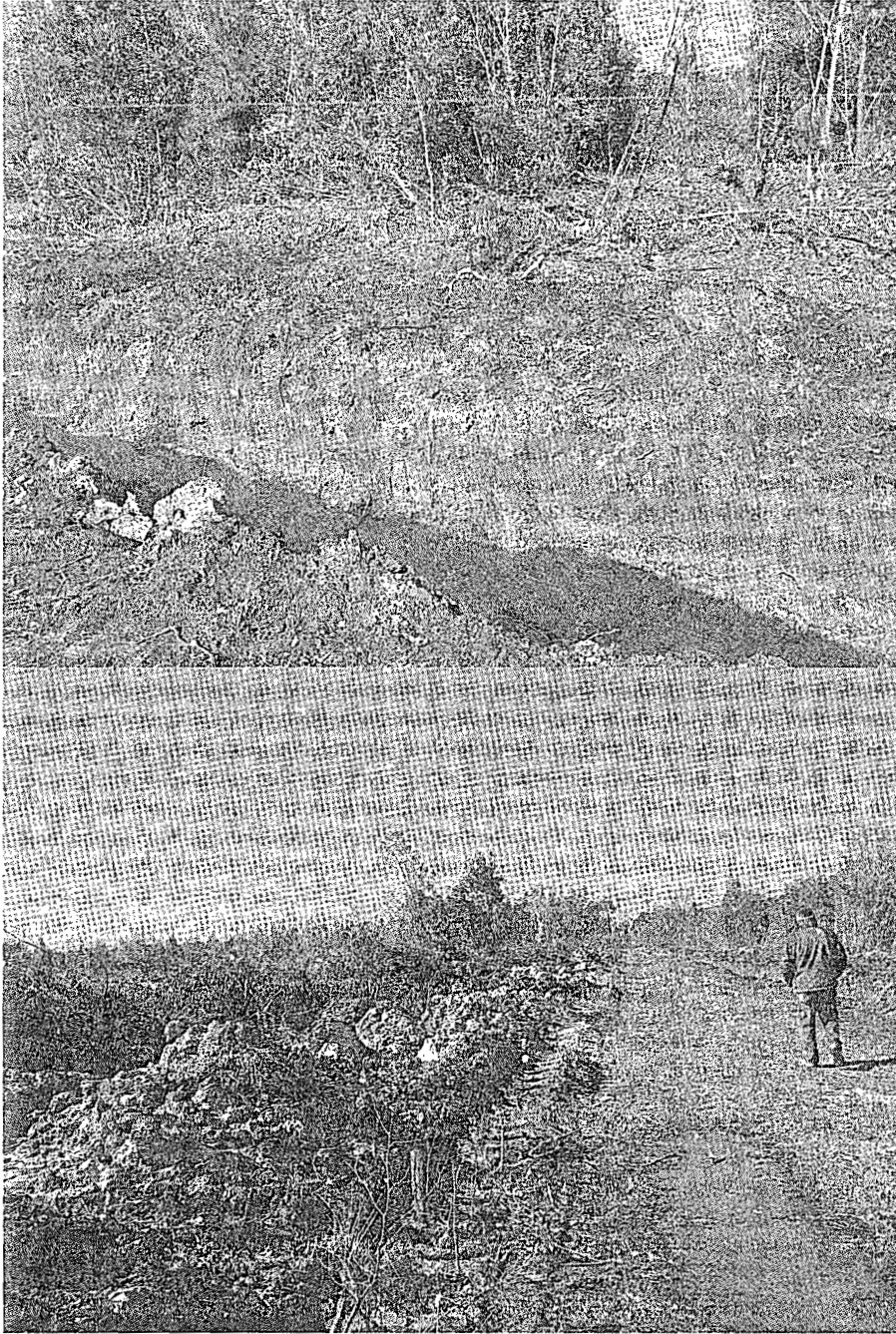


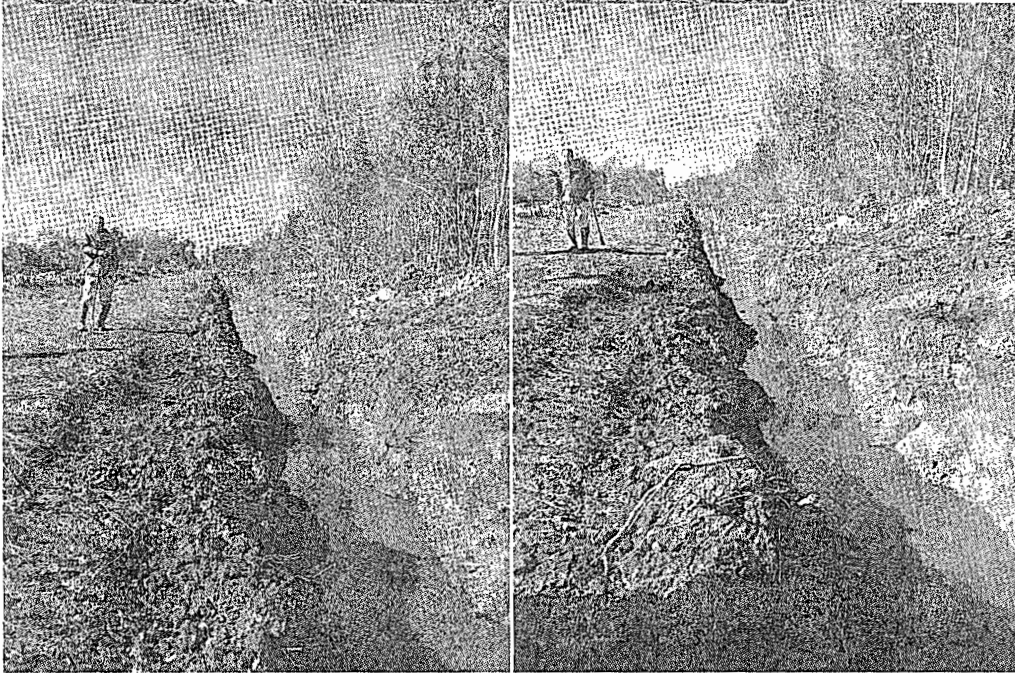












Document ID: 0011

☒ NON-EXEMPT ☐ PARTIALLY EXEMPT ☐ EXEMPT

August 4, 2013

To Whom It May Concern:

Spring Creek Farms, LLC authorizes Abel Harmon and the Army Corps of Engineers to enter the 4591 acre track located in Pamlico County, North Carolina. Abel Harmon shall act as agent for Spring Creek Farms, LLC.

Mark Beck 8-4-13

Mark Beck

Manager

Spring Creek Farms, LLC

Abel Harmon 252.916.5602 cell



December 15, 2013

Emily Greer, Project Manager  
US Army Corps of Engineers  
2407 West 5<sup>th</sup> Street  
Washington, North Carolina 27889

**RECEIVED**

**DEC 16 2013**

**U.S. ARMY CORPS ENG**  
Washington Regulatory Fld Ofc

Dear Ms. Greer,

Please reference our onsite meetings over the last few weeks and the onsite inspections by representatives of the US Environmental Protection Agency, Mike Wiley and Molly Davis, on the Spring Creek Farms tract, located near Merritt, in Pamlico County, North Carolina.

The attached map and Data Sheet is for the upland area that we reviewed with you and EPA and determined that there were no Hydric Soil Indicators present. This area consists of 81.21 acres and is shown on the survey prepared by Herbert J. Nobles on 12-13-2013. This area was delineated in accordance with the criteria that we established onsite with EPA and was not affected by the drainage ditches. The area is mapped as a Hydric Soil but there are no indicators present. The area still meets the Vegetation parameter because the dominants are >50% Fac, but there are more FacU plants in this area than anywhere else on the property.

I am still preparing the Data Sheets for the approximate 768 acre area that we have reviewed per the instructions provided by you and your Office Chief, Bill Biddlecome, and plan to submit them to you in the next week or two. It is looking like the majority of the data points will be very similar, so I expect to turn in Data Sheets for those areas where there are soil, topographic, or significant vegetation changes. I have collected data for almost 100 points but will result in only several Data Sheets due to the same soil series and similar vegetation.

Please review the attachments and document our work to move forward with work in this area of no jurisdiction. We need to keep the project moving forward and keep people working on the site. We also look forward to hearing from you soon about the decisions made by EPA on the old drainage ditches on the rest of the land. We are anticipating a positive outcome based on the discussions we had during our meetings and the fact the ditches are so old and involved so many different property owners over the last 25 plus years.

Thanks again for all your help and we look forward to seeing you soon. You can reach me directly at 252-916-5602 if there are any questions.

Sincerely,



Abel Harmon, Agent for Spring Creek Farms, LLC

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Merritt / Pamlico Sampling Date: Nov 14, 2013  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: NH 1  
 Investigator(s): Abel Harmon Section, Township, Range: None  
 Landform (hillslope, terrace, etc.): Interstream Divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35 07 38.0562 N Long: -76 41 21.4958 W Datum: NAD 83  
 Soil Map Unit Name: Ap – Arapahoe loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

Remarks:

All 3 required wetland parameters are not satisfied per the Corps of Engineers 1987 Manual and the Atlantic and Gulf Coastal Plain Regional Supplement.

## HYDROLOGY

### Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Marl Deposits (B15) (LRR U)                |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

### Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |
| <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)             |

### Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>N/A</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;60 inch</u>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;60 inch</u>

(Includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Aerial photography reveals extensive network of ditches in mid to late 1980s. These ditches included original logging road construction prior to 1970s and subsequent lateral ditch development.

Remarks:

Project area is extensively drained. There is not an extensive network of lateral ditches in this project area.

# VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: NH 1

## Tree Stratum (Plot size: 30 ft )

	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	60	<input checked="" type="checkbox"/>	Fac
2. Acer rubrum	20	<input checked="" type="checkbox"/>	Fac
3. Quercus alba	5	<input type="checkbox"/>	FacU
4. Quercus stellata	5	<input type="checkbox"/>	FacU
5.		<input type="checkbox"/>	
6.		<input type="checkbox"/>	
7.		<input type="checkbox"/>	
8.		<input type="checkbox"/>	
90 % = Total Cover			
50% of total cover:		20% of total cover:	

## Sapling/Shrub Stratum (Plot size: 30 ft )

	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	40	<input checked="" type="checkbox"/>	Fac
2. Acer rubrum	10	<input type="checkbox"/>	Fac
3. Cornus florida	10	<input type="checkbox"/>	FacU
4. Fagus grandifolia	5	<input type="checkbox"/>	FacU
5.		<input type="checkbox"/>	
6.		<input type="checkbox"/>	
7.		<input type="checkbox"/>	
8.		<input type="checkbox"/>	
65 % = Total Cover			
50% of total cover:		20% of total cover:	

## Herb Stratum (Plot size: 30 ft )

	Absolute % Cover	Dominant Species?	Indicator Status
1. Eupatorium capillifolium	30	<input checked="" type="checkbox"/>	FacU
2. Phragmites americana	10	<input type="checkbox"/>	FacU
3. Festuca obtuse	10	<input type="checkbox"/>	FacU
4.		<input type="checkbox"/>	
5.		<input type="checkbox"/>	
6.		<input type="checkbox"/>	
7.		<input type="checkbox"/>	
8.		<input type="checkbox"/>	
9.		<input type="checkbox"/>	
10.		<input type="checkbox"/>	
11.		<input type="checkbox"/>	
12.		<input type="checkbox"/>	
50 % = Total Cover			
50% of total cover:		20% of total cover:	

## Woody Vine Stratum (Plot size: 30 ft )

	Absolute % Cover	Dominant Species?	Indicator Status
1. Smilax rotundifolia	10	<input checked="" type="checkbox"/>	Fac
2. Toxicodendron radicans	5	<input type="checkbox"/>	Fac
3.		<input type="checkbox"/>	
4.		<input type="checkbox"/>	
5.		<input type="checkbox"/>	
15 % = Total Cover			
50% of total cover:		20% of total cover:	

### Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	80 %	(A/B)

### Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

### Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
- ☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

### Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or larger in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft. (1m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines, greater than 3.28 ft. in height.

Hydrophytic  
Vegetation  
Present?

Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).

Project area has been clear cut and all woody vegetation removed.



## SOIL

Sampling Point: NH 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10 YR 5/2	100					Loamy fs	
8-11	10 YR 6/3	100					Loamy fs	
12-24+	5 Y 8/8	100					Sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 160A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 160A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (If observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present?

Yes ☐No ☒

## Remarks:

Project area is mapped as Arapahoe loamy fine sand in the Pamlico County Soil Survey. However, the project area includes several other soil series as inclusions, Ballahack, Stockade, Wasda, and Yonges. The Yonges Series most closely matches the field data. There are no Hydric Soil Indicators present in this sample area.

There is also notable topographic relief in this area and fewer ditches than throughout other areas in the proximity of the project site.

# WETLAND DETERMINATION DATA FORM -- Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Meritt / Pamlico Sampling Date: Nov 14, 2013  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: NH 1  
 Investigator(s): Abel Harmon Section, Township, Range: None  
 Landform (hillslope, terrace, etc.): Interstream Divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35 07 38.0562 N Long: -76 41 21.4958 W Datum: NAD 83  
 Soil Map Unit Name: Ap - Arapahoe loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

All 3 required wetland parameters are not satisfied per the Corps of Engineers 1987 Manual and the Atlantic and Gulf Coastal Plain Regional Supplement.

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations:		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>N/A</u>	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;60 inch</u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): <u>&gt;60 inch</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Aerial photography reveals extensive network of ditches in mid to late 1980s. These ditches included original logging road construction prior to 1970s and subsequent lateral ditch development.

Remarks:

Project area is extensively drained. There is not an extensive network of lateral ditches in this project area.

# **VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: NH 1

<u>Tree Stratum</u> (Plot size: <u>30 ft</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Pinus taeda</i>	60	<input checked="" type="checkbox"/>	Fac
2.	<i>Acer rubrum</i>	20	<input checked="" type="checkbox"/>	Fac
3.	<i>Quercus alba</i>	5	<input type="checkbox"/>	FacU
4.	<i>Quercus stellata</i>	5	<input type="checkbox"/>	FacU
5.			<input type="checkbox"/>	
6.			<input type="checkbox"/>	
7.			<input type="checkbox"/>	
8.			<input type="checkbox"/>	

90 % = Total Cover  
50% of total cover: \_\_\_\_\_  
20% of total cover: \_\_\_\_\_

<u>Sapling/Shrub Stratum</u> (Plot size: <u>30 ft</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Pinus taeda</i>	40	<input checked="" type="checkbox"/>	Fac
2.	<i>Acer rubrum</i>	10	<input type="checkbox"/>	Fac
3.	<i>Cornus florida</i>	10	<input type="checkbox"/>	FacU
4.	<i>Fagus grandifolia</i>	5	<input type="checkbox"/>	FacU
5.			<input type="checkbox"/>	
6.			<input type="checkbox"/>	
7.			<input type="checkbox"/>	
8.			<input type="checkbox"/>	

65 % = Total Cover  
50% of total cover: \_\_\_\_\_  
20% of total cover: \_\_\_\_\_

<u>Herb Stratum</u> (Plot size: <u>30 ft</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Eupatorium capillifolium</i>	30	<input checked="" type="checkbox"/>	FacU
2.	<i>Phragmites americana</i>	10	<input type="checkbox"/>	FacU
3.	<i>Festuca obtuse</i>	10	<input type="checkbox"/>	FacU
4.			<input type="checkbox"/>	
5.			<input type="checkbox"/>	
6.			<input type="checkbox"/>	
7.			<input type="checkbox"/>	
8.			<input type="checkbox"/>	
9.			<input type="checkbox"/>	
10.			<input type="checkbox"/>	
11.			<input type="checkbox"/>	
12.			<input type="checkbox"/>	

50 % = Total Cover  
50% of total cover: \_\_\_\_\_  
20% of total cover: \_\_\_\_\_

<u>Woody Vine Stratum</u> (Plot size: <u>30 ft</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Smilax rotundifolia</i>	10	<input checked="" type="checkbox"/>	Fac
2.	<i>Toxicodendron radicans</i>	5	<input type="checkbox"/>	Fac
3.			<input type="checkbox"/>	
4.			<input type="checkbox"/>	
5.			<input type="checkbox"/>	

15 % = Total Cover  
50% of total cover: \_\_\_\_\_  
20% of total cover: \_\_\_\_\_

## **Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)  
Total Number of Dominant Species Across All Strata: 5 (B)  
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 % (A/B)

## **Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by:  
OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
FacU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

## **Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation  
☒ 2 - Dominance Test is >60%  
☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

## **Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or larger in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft. (1m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

**Woody vine** – All woody vines, greater than 3.28 ft. in height.

Hydrophytic  
Vegetation  
Present?

Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).

Project area has been clear cut and all woody vegetation removed.



# SOIL

Sampling Point: NH 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10 YR 5/2	100					Loamy fs	
8-11	10 YR 6/3	100					Loamy fs	
12-24+	5 Y 8/8	100					Sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodiles (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

## Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present?

Yes ☐

No ☒

## Remarks:

Project area is mapped as Arapahoe loamy fine sand in the Pamlico County Soil Survey. However, the project area includes several other soil series as inclusions, Ballahack, Stockade, Wasda, and Yonges. The Yonges Series most closely matches the field data. There are no Hydric Soil Indicators present in this sample area.

There is also notable topographic relief in this area and fewer ditches than throughout other areas in the proximity of the project site.

✓ NON-EXEMPT      PARTIALLY EXEMPT      EXEMPT

**WETLAND DETERMINATION DATA FORM**

Project/Site: Spring Creek Farms City/County: Merritt/Pamlico Sampling Date: 12/4/13  
 Applicant/Owner: Spring Creek Farms, LLC State: NC Sampling Point: Off 400-acre Site  
 Investigator(s): M.Wylie,M.Davis,H.Wicker,E. Greer Section, Township, Range:                       
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): <1  
 Subregion (LRR or MLRA): T Lat: 35 degrees 7' 10.554" N Long: 76 degrees 41' 3.372" W Datum: NAD 83  
 Soil Map Unit Name: Ap - Arapahoe loamy fine sand NWI classification: PFO4A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u>    </u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>X</u>	
Remarks: 400-acre Site has been ditched sometime between 1988 and 1993. Lateral field ditches dug every 660 feet approximately five feet deep by eight feet TOB (pictures 27,28) Lateral ditches were recently maintained (this year). Ditches in place for over 25 years.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b>		
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u>	Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u>		
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: No saturation found within upper 24 inches (picture 29). Consultant Able Harmen stated that the nearby area received approximately 4 inches of rain within the last five days. A light to moderate rain was falling during our investigation. Data sheet complete by 1115.		

## SOIL

Sampling Point: Off 400-acre Site

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2								root mat
2-13	10 YR 2/1	100						mucky loam but dry

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Histosol (A1)<br><input type="checkbox"/> Histic Epipedon (A2)<br><input type="checkbox"/> Black Histic (A3)<br><input type="checkbox"/> Hydrogen Sulfide (A4)<br><input type="checkbox"/> Stratified Layers (A5)<br><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)<br><input checked="" type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)<br><input type="checkbox"/> Muck Presence (A8) (LRR U)<br><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)<br><input type="checkbox"/> Depleted Below Dark Surface (A11)<br><input type="checkbox"/> Thick Dark Surface (A12)<br><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)<br><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)<br><input type="checkbox"/> Sandy Gleyed Matrix (S4)<br><input type="checkbox"/> Sandy Redox (S5)<br><input type="checkbox"/> Stripped Matrix (S6)<br><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)<br><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)<br><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)<br><input type="checkbox"/> Loamy Gleyed Matrix (F2)<br><input type="checkbox"/> Depleted Matrix (F3)<br><input type="checkbox"/> Redox Dark Surface (F6)<br><input type="checkbox"/> Depleted Dark Surface (F7)<br><input type="checkbox"/> Redox Depressions (F8)<br><input type="checkbox"/> Marl (F10) (LRR U)<br><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)<br><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)<br><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)<br><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)<br><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)<br><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)<br><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)<br><input type="checkbox"/> 2 cm Muck (A10) (LRR S)<br><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)<br><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)<br><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)<br><input type="checkbox"/> Red Parent Material (TF2)<br><input type="checkbox"/> Very Shallow Dark Surface (TF12)<br><input type="checkbox"/> Other (Explain in Remarks) |
|---|--|---|

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No \_\_\_\_\_

Remarks:

Picture 30 of soil profile  
 No saturation in pit at 24 inches



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Merritt / Pamlico Sampling Date: 6/8/13  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: A  
 Investigator(s): Abel Harmon Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Interstream divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35.076309 Long: -76.692201 Datum: NAD 83  
 Soil Map Unit Name: Ap-Arapahoe loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Wetland	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:			
All 3 required wetland parameters are not satisfied per 1987 Manual and Regional Supplement.			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b>		<b>Secondary Indicators (minimum of two required)</b>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;48 in.</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;48 in.</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
Project area is extensively drained.			

**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: A

Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pinus taeda</i>	60	<input checked="" type="checkbox"/>	Fac
2. <i>Liquidambar styraciflua</i>	15	<input type="checkbox"/>	Fac
3. <i>Liriodendron tulipifera</i>	5	<input type="checkbox"/>	Fac
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
50% of total cover: _____		80 % = Total Cover 20% of total cover: _____	

Sapling/Shrub Stratum (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Acer rubrum</i>	20	<input checked="" type="checkbox"/>	Fac
2. <i>Pinus taeda</i>	10	<input checked="" type="checkbox"/>	Fac
3. <i>Ilex opaca</i>	5	<input type="checkbox"/>	Fac
4. <i>Liquidambar styraciflua</i>	5	<input type="checkbox"/>	Fac
5. <i>Persea palustris</i>	5	<input type="checkbox"/>	FacW
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
50% of total cover: _____		45 % = Total Cover 20% of total cover: _____	

Herb Stratum (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Woodwardia areolata</i>	2	<input checked="" type="checkbox"/>	Obl
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
50% of total cover: _____		2 % = Total Cover 20% of total cover: _____	

Woody Vine Stratum (Plot size: <u>30 ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Gelsemium semipervirens</i>	15	<input checked="" type="checkbox"/>	Fac
2. <i>Smilax rotundifolia</i>	10	<input checked="" type="checkbox"/>	Fac
3. <i>Vitis rotundifolia</i>	10	<input checked="" type="checkbox"/>	Fac
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
50% of total cover: _____		35 % = Total Cover 20% of total cover: _____	

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>7</u> (A)
Total Number of Dominant Species Across All Strata:	<u>7</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)

Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species	x 1 = _____
FACW species	x 2 = _____
FAC species	x 3 = _____
FACU species	x 4 = _____
UPL species	x 5 = _____
Column Totals:	(A) _____ (B) _____

Prevalence Index = B/A = _____	
Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:
<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or larger in diameter at breast height (DBH), regardless of height.
<b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft. (1m) tall.
<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
<b>Woody vine</b> – All woody vines, greater than 3.28 ft. in height.

Hydrophytic Vegetation Present?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: (If observed, list morphological adaptations below).

Project area is in various stages of cut over activities.

## SOIL

Sampling Point: A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-11	10 YR 2/1	100					Loamy sand	
11-17	10 YR 2/2	100					Loamy sand	
17-21	10 YR 4/1	95	10 YR 5/2	5	C	M	Sand	
21-30 +	10 YR 6/1	85	10 YR 4/4	10	C	M	Sand	
				5	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 161)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (If observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present?

Yes ☒ No ☐

## Remarks:

Soil matches soil profile in Pamlico County Soil Survey.



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Merritt / Pamlico Sampling Date: 6/8/13  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: B  
 Investigator(s): Abel Harmon Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Interstream divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35.070464 Long: -76.692009 Datum: NAD 83  
 Soil Map Unit Name: Ap-Arapahoe loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Wetland	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:			
All 3 required wetland parameters are not satisfied per 1987 Manual and Regional Supplement.			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;48 in.</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;48 in.</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
Project area is extensively drained.			

**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: B

Tree Stratum (Plot size: <u>30 ft.</u> )			Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.	<i>Pinus taeda</i>		60	<input checked="" type="checkbox"/>	Fac	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>6</u> (A)
	<i>Liquidambar styraciflua</i>		15	<input type="checkbox"/>	Fac	Total Number of Dominant Species Across All Strata:	<u>6</u> (B)
3.	<i>Liriodendron tulipifera</i>		5	<input type="checkbox"/>	Fac	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4.	<i>Acer rubrum</i>		5	<input type="checkbox"/>	Fac		
5.				<input type="checkbox"/>			
6.				<input type="checkbox"/>			
7.				<input type="checkbox"/>			
8.				<input type="checkbox"/>			
			85 % = Total Cover				
50% of total cover:			20% of total cover:				
Sapling/Shrub Stratum (Plot size: <u>30 ft.</u> )			Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1.	<i>Acer rubrum</i>		20	<input checked="" type="checkbox"/>	Fac	Total % Cover of:	Multiply by:
2.	<i>Pinus taeda</i>		10	<input checked="" type="checkbox"/>	Fac	OBL species	x 1 =
3.	<i>Ilex opaca</i>		5	<input type="checkbox"/>	Fac	FACW species	x 2 =
4.	<i>Liquidambar styraciflua</i>		5	<input type="checkbox"/>	Fac	FAC species	x 3 =
5.	<i>Morella cerifera</i>		5	<input type="checkbox"/>	Fac	FACU species	x 4 =
6.	<i>Magnolia virginiana</i>		5	<input type="checkbox"/>	FacW	UPL species	x 5 =
7.				<input type="checkbox"/>		Column Totals:	(A) (B)
8.				<input type="checkbox"/>			
			50 % = Total Cover				
50% of total cover:			20% of total cover:				
Herb Stratum (Plot size: <u>30 ft.</u> )			Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1.	<i>Woodwardia areolata</i>		10	<input checked="" type="checkbox"/>	Obl	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
2.				<input type="checkbox"/>		<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
3.				<input type="checkbox"/>		<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
4.				<input type="checkbox"/>		<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5.				<input type="checkbox"/>			
6.				<input type="checkbox"/>			
7.				<input type="checkbox"/>			
8.				<input type="checkbox"/>			
9.				<input type="checkbox"/>			
10.				<input type="checkbox"/>			
11.				<input type="checkbox"/>			
12.				<input type="checkbox"/>			
			10 % = Total Cover				
50% of total cover:			20% of total cover:				
Woody Vine Stratum (Plot size: <u>30 ft.</u> )			Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?	
1.	<i>Gelsemium sempervirens</i>		15	<input checked="" type="checkbox"/>	Fac	Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/>
2.	<i>Smilax rotundifolia</i>		10	<input checked="" type="checkbox"/>	Fac		
3.				<input type="checkbox"/>			
4.				<input type="checkbox"/>			
5.				<input type="checkbox"/>			
			25 % = Total Cover				
50% of total cover:			20% of total cover:				
Remarks: (If observed, list morphological adaptations below). Project area is in various stages of cut over activities.							

## SOIL

Sampling Point: B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-11	10 YR 2/1	100					Loamy sand	
11-17	10 YR 2/2	100					Loamy sand	
17-21	10 YR 4/1	95	10 YR 5/2	5	C	M	Sand	
21-30 +	10 YR 6/1	85	10 YR 4/4	10	C	M	Sand	
				5	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A18) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present?

Yes ☒No ☐

## Remarks:

Soil matches soil profile in Pamlico County Soil Survey.



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Merritt / Pamlico Sampling Date: 6/8/13  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: C  
 Investigator(s): Abel Harmon Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Interstream divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35.072671 Long: -76.688340 Datum: NAD 83  
 Soil Map Unit Name: Sk-Stockade loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Wetland	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: All 3 required wetland parameters are not satisfied per 1987 Manual and Regional Supplement.		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;60 in.</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;80 in.</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  			
Remarks: Project area is extensively drained.			

## SOIL

Sampling Point: C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 2/1	100					Loamy sand	
10-19	10 YR 3/2	100					Loamy sand	
19-28	10 YR 6/2	90	10 YR 6/6	10	C	M	Sandy clay	
28-41	10 YR 6/1	80	10 YR 6/6	10	D	M	Sandy clay	
				10	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy-Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present?

Yes ☒No ☐

## Remarks:

Soil matches soil profile in Pamlico County Soil Survey.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Merritt / Pamlico Sampling Date: 6/8/13  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: D  
 Investigator(s): Abel Harmon Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Interstream divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35.070070 Long: -76.685204 Datum: NAD 83  
 Soil Map Unit Name: Sk-Stockade loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Wetland	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:			
All 3 required wetland parameters are not satisfied per 1987 Manual and Regional Supplement.			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b>		<b>Secondary Indicators (minimum of two required)</b>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;60 in.</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;60 in.</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
Project area is extensively drained.			



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: D

Tree Stratum (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Pinus taeda</i>	30	<input checked="" type="checkbox"/>	Fac
	<i>Liquidambar styraciflua</i>	30	<input checked="" type="checkbox"/>	Fac
3.	<i>Liriodendron tulipifera</i>	10	<input checked="" type="checkbox"/>	Fac
4.	<i>Acer rubrum</i>	5	<input type="checkbox"/>	Fac
5.			<input type="checkbox"/>	
6.			<input type="checkbox"/>	
7.			<input type="checkbox"/>	
8.			<input type="checkbox"/>	

75 % = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Persea palustris</i>	20	<input checked="" type="checkbox"/>	FacW
2.	<i>Pinus taeda</i>	20	<input checked="" type="checkbox"/>	Fac
3.	<i>Ilex opaca</i>	10	<input type="checkbox"/>	Fac
4.	<i>Liquidambar styraciflua</i>	5	<input type="checkbox"/>	Fac
5.	<i>Acer rubrum</i>	5	<input type="checkbox"/>	Fac
6.			<input type="checkbox"/>	
7.			<input type="checkbox"/>	
8.			<input type="checkbox"/>	

60 % = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Woodwardia areolata</i>	10	<input checked="" type="checkbox"/>	Obl
2.	<i>Osmundia regalis</i>	2	<input type="checkbox"/>	Obl
3.			<input type="checkbox"/>	
4.			<input type="checkbox"/>	
5.			<input type="checkbox"/>	
6.			<input type="checkbox"/>	
7.			<input type="checkbox"/>	
8.			<input type="checkbox"/>	
9.			<input type="checkbox"/>	
10.			<input type="checkbox"/>	
11.			<input type="checkbox"/>	
12.			<input type="checkbox"/>	

12 % = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Woody Vine Stratum (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Smilax glauca</i>	10	<input checked="" type="checkbox"/>	Fac
2.	<i>Smilax rotundifolia</i>	10	<input checked="" type="checkbox"/>	Fac
3.	<i>Toxicodendron radicans</i>	10	<input checked="" type="checkbox"/>	Fac
4.			<input type="checkbox"/>	
5.			<input type="checkbox"/>	

30 % = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>9</u> (A)
Total Number of Dominant Species Across All Strata:	<u>9</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)

Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species	x 1 = _____
FACW species	x 2 = _____
FAC species	x 3 = _____
FACU species	x 4 = _____
UPL species	x 5 = _____
Column Totals:	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:	
<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or larger in diameter at breast height (DBH), regardless of height.	
<b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft. (1m) tall.	
<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
<b>Woody vine</b> – All woody vines, greater than 3.28 ft. in height.	

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---------------------------------	---

Remarks: (If observed, list morphological adaptations below).

Project area is in various stages of cut over activities.

## SOIL

Sampling Point: D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 2/1	100					Loamy sand	
10-19	10 YR 3/2	100					Loamy sand	
19-26	10 YR 6/2	90	10 YR 6/6	10	C	M	Sandy clay	
26-41	10 YR 5/1	80	10 YR 6/6	10	D	M	Sandy clay	
				10	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present?

Yes ☒No ☐

## Remarks:

Soil matches soil profile in Pamlico County Soil Survey.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms City/County: Merritt/Pamlico Sampling Date: 12/4/13  
 Applicant/Owner: Spring Creek Farms, LLC State: NC Sampling Point: Off 400-acre Site  
 Investigator(s): M. Wylie, M. Davis, H. Wicker, E. Greer Section, Township, Range: B. B. 34 11 6 N 10 W 1 E  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): <1  
 Subregion (LRR or MLRA): T Lat: 35 degrees 7' 10.554" N Long: 76 degrees 41' 3.372" W Datum: NAD 83  
 Soil Map Unit Name: Ap - Arapahoe loamy fine sand NWI classification: PFO4A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: 400-acre Site has been ditched sometime between 1988 and 1993. Lateral field ditches dug every 660 feet approximately five feet deep by eight feet TOB (pictures 27,28) Lateral ditches were recently maintained (this year). Ditches in place for over 25 years.	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks: No saturation found within upper 24 inches (picture 29). Consultant Able Harmen stated that the nearby area received approximately 4 inches of rain within the last five days. A light to moderate rain was falling during our investigation. Data sheet complete by 1115.		



**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: off 400-acre Site

Tree Stratum (Plot size: 30 feet )		Absolute % Cover	Dominant Species?	Indicator Status
1.	Persea borbonia	70	X	FACW
2.	Liquidambar styraciflua	2		FAC
3.				
4.				
5.				
6.				
7.				
8.				

72 = Total Cover

50% of total cover: 36 20% of total cover: 14.4

Sapling/Shrub Stratum (Plot size: 30 feet )		Absolute % Cover	Dominant Species?	Indicator Status
1.	Persea borbonia	30	X	FACW
2.	Liquidambar styraciflua	2		FAC
3.	Illex coriacea	30	X	FACW
4.	Vaccinium corymbosum	4		FACW
5.				
6.				
7.				
8.				

66 = Total Cover

50% of total cover: 33 20% of total cover: 13.2

Herb Stratum (Plot size: 30 feet )		Absolute % Cover	Dominant Species?	Indicator Status
1.	Illex coriacea	5	X	FACW
2.	Persea borbonia	5	X	FACW
3.	Aronia arbutifolia (Photinia pyrifolia)	<1		FACW
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

11 = Total Cover

50% of total cover: 5.5 20% of total cover: 2.2

Woody Vine Stratum (Plot size: 30 feet )		Absolute % Cover	Dominant Species?	Indicator Status
1.	Smilax rotundifolia	1	X	FAC
2.	Lonicera japonica	<1	X	FAC
3.				
4.				
5.				

2 = Total Cover

50% of total cover: 1 20% of total cover: 0.2

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation  
☒ 2 - Dominance Test is >50%  
☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No

Remarks: (If observed, list morphological adaptations below).

Predominantly pine needles and leaves in understory.  
 FAC Neutral Test: Five FACW/OBL to Zero FACU/UPL, passed.  
 Picture 31 of vegetation surrounding pit.

## SOIL

Sampling Point: Off 400-acre Site

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2								root mat
2-13	10 YR 2/1	100						mucky loam but dry

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☒ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No \_\_\_\_\_

Remarks:

Picture 30 of soil profile  
No saturation in pit at 24 inches

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Merrill / Pamlico Sampling Date: 8/9/13  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: D  
 Investigator(s): Abel Harmon Section, Township, Range: \_\_\_\_\_  
 Landform (hilllope, terrace, etc.): Interstream divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35.070070 Long: -78.886204 Datum: NAD 83  
 Soil Map Unit Name: Sk-Stockade loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydro Soil Present? Wetland	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

Remarks:

All 3 required wetland parameters are not satisfied per 1987 Manual and Regional Supplement.

## HYDROLOGY

### Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Marl Deposits (B16) (LRR U)                |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B6)                        | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

### Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B8)                  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B9)   |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C6)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquifer (D3)                      |
| <input checked="" type="checkbox"/> FAC-Natural Test (D5)          |
| <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)             |

### Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>N/A</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;60 in.</u>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;60 in.</u>

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project area is extensively drained.

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: D

Tree Stratum (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Pinus taeda</i>	30	<input checked="" type="checkbox"/>	Fao
	<i>Liquidambar styraciflua</i>	30	<input checked="" type="checkbox"/>	Fao
3.	<i>Liriodendron tulipifera</i>	10	<input checked="" type="checkbox"/>	Fao
4.	<i>Acer rubrum</i>	5	<input type="checkbox"/>	Fao
5.			<input type="checkbox"/>	
6.			<input type="checkbox"/>	
7.			<input type="checkbox"/>	
8.			<input type="checkbox"/>	
50% of total cover:		75 % = Total Cover		
		20% of total cover:		
Sapling/Shrub Stratum (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Persea palustris</i>	20	<input checked="" type="checkbox"/>	FacW
2.	<i>Pinus taeda</i>	20	<input checked="" type="checkbox"/>	Fac
3.	<i>Ilex opaca</i>	10	<input type="checkbox"/>	Fac
4.	<i>Liquidambar styraciflua</i>	5	<input type="checkbox"/>	Fac
5.	<i>Acer rubrum</i>	5	<input type="checkbox"/>	Fao
6.			<input type="checkbox"/>	
7.			<input type="checkbox"/>	
8.			<input type="checkbox"/>	
50% of total cover:		60 % = Total Cover		
		20% of total cover:		
Herb Stratum (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Woodwardia areolata</i>	10	<input checked="" type="checkbox"/>	Obl
2.	<i>Osmundia regalis</i>	2	<input type="checkbox"/>	Obl
3.			<input type="checkbox"/>	
4.			<input type="checkbox"/>	
5.			<input type="checkbox"/>	
6.			<input type="checkbox"/>	
7.			<input type="checkbox"/>	
8.			<input type="checkbox"/>	
9.			<input type="checkbox"/>	
10.			<input type="checkbox"/>	
11.			<input type="checkbox"/>	
12.			<input type="checkbox"/>	
50% of total cover:		12 % = Total Cover		
		20% of total cover:		
Woody Vine Stratum (Plot size: <u>30 ft.</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Smilax glauca</i>	10	<input checked="" type="checkbox"/>	Fao
2.	<i>Smilax rotundifolia</i>	10	<input checked="" type="checkbox"/>	Fao
3.	<i>Toxicodendron radicans</i>	10	<input checked="" type="checkbox"/>	Fao
4.			<input type="checkbox"/>	
5.			<input type="checkbox"/>	
50% of total cover:		30 % = Total Cover		
		20% of total cover:		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/D)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >60%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or larger in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft. (1m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines, greater than 3.28 ft. in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).

Project area is in various stages of cut over activities.



# WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Merritt / Pamlico Sampling Date: 8/8/13  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: A  
 Investigator(s): Abel Harmon Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Interstream divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35.078309 Long: -76.692201 Datum: NAD 83  
 Soil Map Unit Name: Ap-Areapahoe loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Wetland	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: All 3 required wetland parameters are not satisfied per 1987 Manual and Regional Supplement.		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B6) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B8) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;48 in.</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;48 in.</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), If available:		
Remarks: Project area is extensively drained.		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: A

Tree Stratum (Plot size: <u>30 ft.</u> )			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pinus taeda</i>	60	<input checked="" type="checkbox"/>	Fac
2. <i>Liquidambar styraciflua</i>	15	<input type="checkbox"/>	Fac
3. <i>Liriodendron tulipifera</i>	5	<input type="checkbox"/>	Fac
4.		<input type="checkbox"/>	
5.		<input type="checkbox"/>	
6.		<input type="checkbox"/>	
7.		<input type="checkbox"/>	
8.		<input type="checkbox"/>	

80 % = Total Cover  
60% of total cover: \_\_\_\_\_  
20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>30 ft.</u> )			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Acer rubrum</i>	20	<input checked="" type="checkbox"/>	Fao
2. <i>Pinus taeda</i>	10	<input checked="" type="checkbox"/>	Fao
3. <i>Ilex opaca</i>	5	<input type="checkbox"/>	Fac
4. <i>Liquidambar styraciflua</i>	5	<input type="checkbox"/>	Fao
5. <i>Persea palustris</i>	6	<input type="checkbox"/>	FacW
6.		<input type="checkbox"/>	
7.		<input type="checkbox"/>	
8.		<input type="checkbox"/>	

45 % = Total Cover  
60% of total cover: \_\_\_\_\_  
20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>30 ft.</u> )			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Woodwardia areolata</i>	2	<input checked="" type="checkbox"/>	Obl
2.		<input type="checkbox"/>	
3.		<input type="checkbox"/>	
4.		<input type="checkbox"/>	
5.		<input type="checkbox"/>	
6.		<input type="checkbox"/>	
7.		<input type="checkbox"/>	
8.		<input type="checkbox"/>	
9.		<input type="checkbox"/>	
10.		<input type="checkbox"/>	
11.		<input type="checkbox"/>	
12.		<input type="checkbox"/>	

2 % = Total Cover  
60% of total cover: \_\_\_\_\_  
20% of total cover: \_\_\_\_\_

Woody Vine Stratum (Plot size: <u>30 ft.</u> )			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Gelsemium sempervirens</i>	15	<input checked="" type="checkbox"/>	Fac
2. <i>Smilax rotundifolia</i>	10	<input checked="" type="checkbox"/>	Fao
3. <i>Vitis rotundifolia</i>	10	<input checked="" type="checkbox"/>	Fao
4.		<input type="checkbox"/>	
5.		<input type="checkbox"/>	

35 % = Total Cover  
60% of total cover: \_\_\_\_\_  
20% of total cover: \_\_\_\_\_

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>7</u> (A)
Total Number of Dominant Species Across All Strata:	<u>7</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)

Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
<input checked="" type="checkbox"/> 2 - Dominance Test is >60%	
<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or larger in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft. (1m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

**Woody vine** – All woody vines, greater than 3.28 ft. in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (if observed, list morphological adaptations below).

Project area is in various stages of cut over activities.

## SOIL

Sampling Point: A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-11	10 YR 2/1	100					Loamy sand	
11-17	10 YR 2/2	100					Loamy sand	
17-21	10 YR 4/1	95	10 YR 5/2	5	C	M	Sand	
21-30 +	10 YR 6/1	85	10 YR 4/4	10	C	M	Sand	
				5	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histio Epipedon (A2)  
☐ Black Histio (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 8 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S6)  
☐ Stripped Matrix (S8)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Mail (F10) (LRR U)  
☐ Depleted Ochre (F11) (MLRA 181)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbro Surface (F13) (LRR P, T, U)  
☐ Delta Ochre (F17) (MLRA 161)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 163C, 163D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F16) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 163B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present?

Yes ☒No ☐

## Remarks:

Soil matches soil profile in Pamlico County Soil Survey.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Merritt / Pamlico Sampling Date: 6/8/13  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: B  
 Investigator(s): Abel Hamon Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Interstream divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35.070484 Long: -76.892009 Datum: NAD 83  
 Soil Map Unit Name: Ap-Arapahoe loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Wetland	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

### Remarks:

All 3 required wetland parameters are not satisfied per 1987 Manual and Regional Supplement.

## HYDROLOGY

### Wetland Hydrology Indicators:

#### Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Marl Deposits (B16) (LRR U)                |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

### Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B8)                  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D6)          |
| <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)             |

### Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): N/A  
 Water Table Present? Yes ☐ No ☒ Depth (inches): >48 in.  
 Saturation Present? Yes ☐ No ☒ Depth (inches): >48 in.  
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

### Remarks:

Project area is extensively drained.



**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: B

Tree Stratum (Plot size: <u>30 ft.</u> )		
	Absolute % Cover	Dominant Species?
1. <i>Pinus taeda</i>	60	<input checked="" type="checkbox"/>
2. <i>Liquidambar styraciflua</i>	15	<input type="checkbox"/>
3. <i>Liriodendron tulipifera</i>	5	<input type="checkbox"/>
4. <i>Acer rubrum</i>	5	<input type="checkbox"/>
5. _____		<input type="checkbox"/>
6. _____		<input type="checkbox"/>
7. _____		<input type="checkbox"/>
8. _____		<input type="checkbox"/>

85 % = Total Cover  
60% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>30 ft.</u> )		
	Absolute % Cover	Dominant Species?
1. <i>Acer rubrum</i>	20	<input checked="" type="checkbox"/>
2. <i>Pinus taeda</i>	10	<input checked="" type="checkbox"/>
3. <i>Ilex opaca</i>	5	<input type="checkbox"/>
4. <i>Liquidambar styraciflua</i>	5	<input type="checkbox"/>
5. <i>Morella cerifera</i>	5	<input type="checkbox"/>
6. <i>Magnolia virginiana</i>	5	<input type="checkbox"/>
7. _____		<input type="checkbox"/>
8. _____		<input type="checkbox"/>

50 % = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>30 ft.</u> )		
	Absolute % Cover	Dominant Species?
1. <i>Woodwardia areolata</i>	10	<input checked="" type="checkbox"/>
2. _____		<input type="checkbox"/>
3. _____		<input type="checkbox"/>
4. _____		<input type="checkbox"/>
5. _____		<input type="checkbox"/>
6. _____		<input type="checkbox"/>
7. _____		<input type="checkbox"/>
8. _____		<input type="checkbox"/>
9. _____		<input type="checkbox"/>
10. _____		<input type="checkbox"/>
11. _____		<input type="checkbox"/>
12. _____		<input type="checkbox"/>

10 % = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Woody Vine Stratum (Plot size: <u>30 ft.</u> )		
	Absolute % Cover	Dominant Species?
1. <i>Gelsemium semipervirens</i>	15	<input checked="" type="checkbox"/>
2. <i>Smitax rotundifolia</i>	10	<input checked="" type="checkbox"/>
3. _____		<input type="checkbox"/>
4. _____		<input type="checkbox"/>
5. _____		<input type="checkbox"/>

25 % = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Indicator Status

Fac

Fac

Fac

Fac

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)  
Total Number of Dominant Species Across All Strata: 6 (B)  
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of: Multiply by:  
OBL species          x 1 =           
FACW species          x 2 =           
FAC species          x 3 =           
FACU species          x 4 =           
UPL species          x 5 =           
Column Totals:          (A)          (B)

Prevalence Index = B/A =         

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation  
☒ 2 - Dominance Test is >50%  
☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or larger in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft. (1m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines, greater than 3.28 ft. in height.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

Remarks: (if observed, list morphological adaptations below).

Project area is in various stages of cut over activities.

## SOIL

Sampling Point: B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-11	10 YR 2/1	100					Loamy sand	
11-17	10 YR 2/2	100					Loamy sand	
17-21	10 YR 4/1	95	10 YR 5/2	5	C	M	Sand	
21-30 +	10 YR 6/1	85	10 YR 4/4	10	C	M	Sand	
				5	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histio Epipedon (A2)  
☐ Black Histio (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A6)  
☐ Organic Bodles (A8) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A18) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (SA)  
☐ Sandy Redox (SB)  
☐ Stripped Matrix (SB)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)  
☐ Red Perent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present?

Yes ☒No ☐

## Remarks:

Soil matches soil profile in Pamlico County Soil Survey.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms, LLC City/County: Merritt / Pamlico Sampling Date: 6/8/13  
 Applicant/Owner: Mark Beck, Manager State: NC Sampling Point: 0  
 Investigator(s): Abel Harmon Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Interstream divide Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR T Lat: 35.072871 Long: -76.688340 Datum: NAD 83  
 Soil Map Unit Name: Sk-Stockade loamy fine sand NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐  
 Hydric Soil Present? Wetland Yes ☒ No ☐  
 Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

Remarks:

All 3 required wetland parameters are not satisfied per 1987 Manual and Regional Supplement.

## HYDROLOGY

### Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Marl Deposits (B16) (LRR U)                |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |   |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

### Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B8)                  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D8)          |
| <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)             |

### Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (Inches): N/A  
 Water Table Present? Yes ☐ No ☒ Depth (Inches): >60 in.  
 Saturation Present? Yes ☐ No ☒ Depth (Inches): >60 in.  
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project area is extensively drained.

## SOIL

Sampling Point: C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 2/1	100					Loamy sand	
10-19	10 YR 3/2	100					Loamy sand	
19-28	10 YR 6/2	80	10 YR 8/6	10	C	M	Sandy clay	
28-41	10 YR 8/1	80	10 YR 8/6	10	D	M	Sandy clay	
				10	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydro Soil Indicators:

- ☐ Histosol (A1)  
☐ Histio Epipedon (A2)  
☐ Black Histio (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 6 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 160A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 161)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Dolic Ochric (F17) (MLRA 161)  
☐ Reduced Vertic (F18) (MLRA 160A, 160B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 163C, 163D)

Indicators for Problematic Hydro Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 160A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 163B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

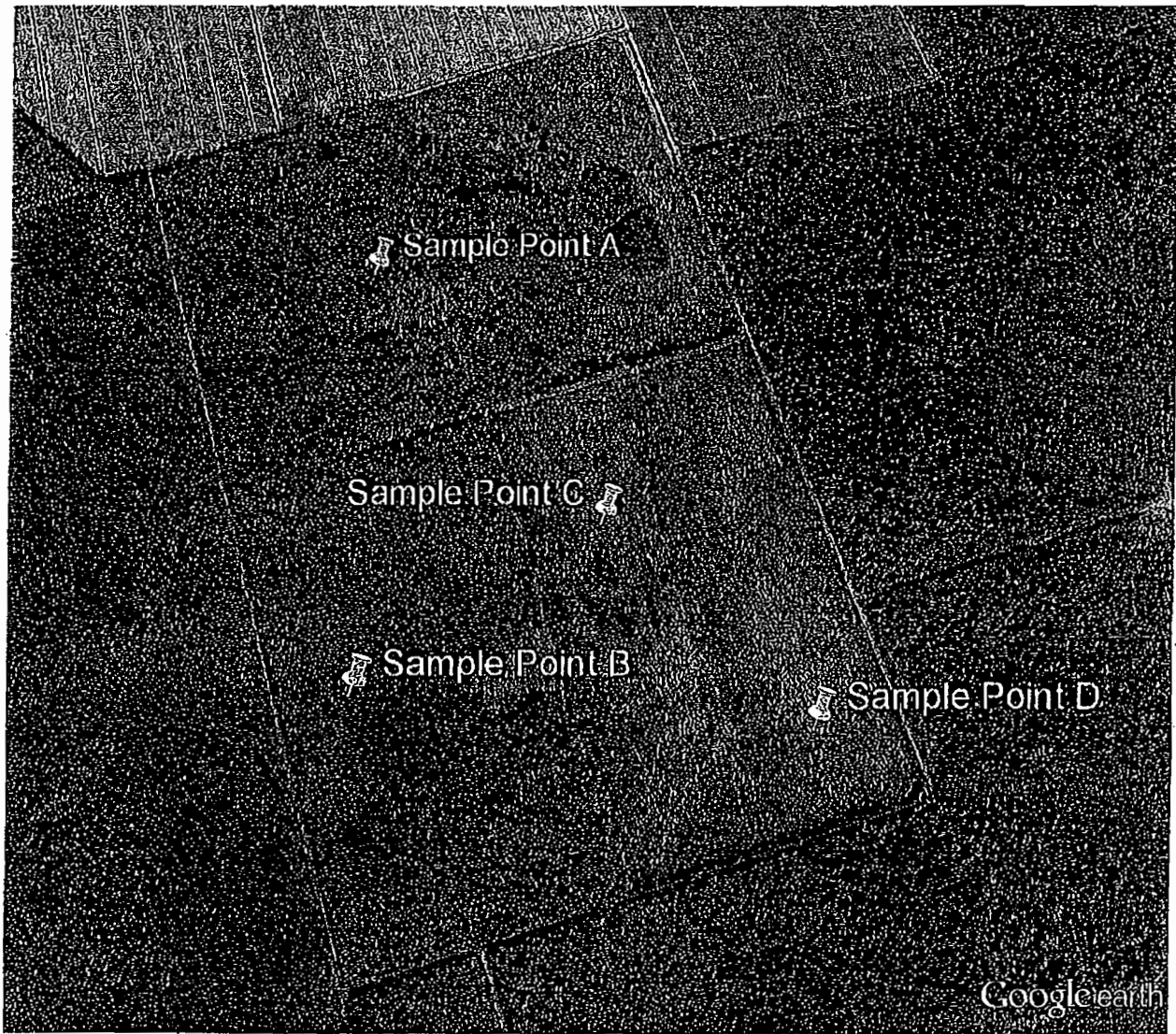
Hydro Soil Present?

Yes ☒No ☐

## Remarks:

Soil matches soil profile in Pamlico County Soil Survey.





Google earth

Google Earth Pro

feet 2000  
meters 600





# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Spring Creek Farms City/County: \_\_\_\_\_ Sampling Date: 12/4/2012  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 35° 07' 13.554"N Long: 76° 41' 3.372"W Datum: NAD 83  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Wetland Hydrology Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Is the Sampled Area within a Wetland? Yes \_\_\_\_\_ No \_\_\_\_\_

### Remarks:

5' deep ditch every 660' on the site  
 ditches were between 1988-1993  
 circumstances have been discussed in 25 Jan

## HYDROLOGY

### Wetland Hydrology Indicators:

#### Primary Indicators (minimum of one is required; check all that apply)

\_\_\_\_ Surface Water (A1) \_\_\_\_\_ Aquatic Fauna (B13)  
 \_\_\_\_ High Water Table (A2) \_\_\_\_\_ Marl Deposits (B15) (LRR U)  
 \_\_\_\_ Saturation (A3) \_\_\_\_\_ Hydrogen Sulfide Odor (C1)  
 \_\_\_\_ Water Marks (B1) \_\_\_\_\_ Oxidized Rhizospheres along Living Roots (C3)  
 \_\_\_\_ Sediment Deposits (B2) \_\_\_\_\_ Presence of Reduced Iron (C4)  
 \_\_\_\_ Drift Deposits (B3) \_\_\_\_\_ Recent Iron Reduction in Tilled Soils (C6)  
 \_\_\_\_ Algal Mat or Crust (B4) \_\_\_\_\_ Thin Muck Surface (C7)  
 \_\_\_\_ Iron Deposits (B5) \_\_\_\_\_ Other (Explain in Remarks)  
 \_\_\_\_ Inundation Visible on Aerial Imagery (B7)  
 \_\_\_\_ Water-Stained Leaves (B9)

### Secondary Indicators (minimum of two required)

\_\_\_\_ Surface Soil Cracks (B6)  
 \_\_\_\_ Sparsely Vegetated Concave Surface (B8)  
 \_\_\_\_ Drainage Patterns (B10)  
 \_\_\_\_ Moss Trim Lines (B16)  
 \_\_\_\_ Dry-Season Water Table (C2)  
 \_\_\_\_ Crayfish Burrows (C8)  
 \_\_\_\_ Saturation Visible on Aerial Imagery (C9)  
 \_\_\_\_ Geomorphic Position (D2)  
 \_\_\_\_ Shallow Aquitard (D3)  
 \_\_\_\_ FAC-Neutral Test (D5)  
 \_\_\_\_ Sphagnum moss (D8) (LRR T, U)

### Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

### Remarks:

No Saturation with upper 24" Pie 25#  
 4" of Rain within last 5 days  
 Lite Rain Today  
 1115  
 Lite Rain  
 Cloudy

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Panicum capillare</u>	<u>70%</u>			Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Sweet Gum</u>	<u>27%</u>			
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. <u>Panicum</u> <u>70%</u> 2. <u>Sweet Gum</u> <u>27%</u> 3. <u>Ilex cornuta</u> <u>3%</u> 4. <u>Vaccinium corymbosum</u> <u>1%</u> 5. _____ 6. _____ 7. _____ 8. _____ _____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Ilex cornuta</u> <u>5%</u> 2. <u>Vaccinium corymbosum</u> <u>5%</u> 3. <u>Cornus</u> <u>&lt; 1%</u> 4. _____ <u>mw</u> 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ 12. _____ _____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. <u>Smilax rotundifolia</u> <u>1%</u> 2. <u>Sonchica latifolia</u> <u>&gt; 1%</u> 3. _____ 4. _____ 5. _____ _____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
1. <u>Smilax rotundifolia</u> <u>1%</u> 2. <u>Sonchica latifolia</u> <u>&gt; 1%</u> 3. _____ 4. _____ 5. _____ _____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____				
<b>Remarks: (If observed, list morphological adaptations below).</b> <u>Pic 30 31" AW</u>				

 Cack  
Berry



Field Data Sheet

# SOIL

Sampling Point: \_\_\_\_\_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2								Root / Mat
2-13	10YR 2/1						Sticky loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☒ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

## Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) (LRR T, U)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

## Restrictive Layer (if observed):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

## Remarks:

Pic 30<sup>th</sup>  
No Saturation in Hole at 24"

## SOIL

Sampling Point: D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10 YR 2/4	100					Loamy sand	
10-19	10 YR 3/2	100					Loamy sand	
19-28	10 YR 6/2	80	10 YR 6/6	10	C	M	Sandy clay	
28-41	10 YR 5/4	80	10 YR 6/6	10	D	M	Sandy clay	
				10	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

## Hydric Soil Indicators:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 8 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F8)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochre (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbria Surface (F13) (LRR P, T, U)  
☐ Delta Ochre (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present?

Yes ☒No ☐

Remarks:

Soil matches soil profile in Pamlico County Soil Survey.

**Wylie, Mike**

**From:** Wylie, Mike  
**Sent:** Tuesday, February 18, 2014 12:48 PM  
**To:** 'Biddlecome, William J SAW'; Davis, Molly; McLendon, Scott C SAW; Wicker, Henry M JR SAW; Mancusi-Ungaro, Philip; Able, Tony; Bowers, Todd  
**Cc:** Greer, Emily C SAW  
**Subject:** RE: Spring Creek Farms (UNCLASSIFIED)

Ok: for Wednesday, 2/19 at 0900  
Talk to you then

Mike

-----Original Message-----

**From:** Biddlecome, William J SAW [<mailto:William.J.Biddlecome@usace.army.mil>]  
**Sent:** Tuesday, February 18, 2014 11:03 AM  
**To:** Wylie, Mike; Davis, Molly; McLendon, Scott C SAW; Wicker, Henry M JR SAW; Mancusi-Ungaro, Philip  
**Cc:** Greer, Emily C SAW  
**Subject:** RE: Spring Creek Farms (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Best day for me will be Wednesday anytime and Thursday in the am.

-----Original Message-----

**From:** Wylie, Mike [<mailto:Wylie.Mike@epa.gov>]  
**Sent:** Tuesday, February 18, 2014 10:55 AM  
**To:** Biddlecome, William J SAW; Davis, Molly; McLendon, Scott C SAW; Wicker, Henry M JR SAW; Mancusi-Ungaro, Philip  
**Cc:** Greer, Emily C SAW  
**Subject:** [EXTERNAL] RE: Spring Creek Farms (UNCLASSIFIED)

Now that we are back to work, can we talk today, Wednesday or Thursday about this site. I can relay my conversation with Able Harmon last week.

-----Original Message-----

**From:** Biddlecome, William J SAW [<mailto:William.J.Biddlecome@usace.army.mil>]  
**Sent:** Tuesday, February 11, 2014 9:56 AM  
**To:** Davis, Molly; McLendon, Scott C SAW; Wylie, Mike; Wicker, Henry M JR SAW  
**Cc:** Greer, Emily C SAW  
**Subject:** RE: Spring Creek Farms (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Emily will be in training all week in Huntsville.

-----Original Message-----

**From:** Davis, Molly [<mailto:Davis.Molly@epa.gov>]  
**Sent:** Tuesday, February 11, 2014 9:46 AM  
**To:** Biddlecome, William J SAW; McLendon, Scott C SAW; Wylie, Mike; Wicker, Henry M JR SAW  
**Cc:** Greer, Emily C SAW  
**Subject:** [EXTERNAL] RE: Spring Creek Farms (UNCLASSIFIED)

Region 4 is shut down due to the impending ice storm and its likely we will be closed tomorrow too. Is Emily back later this week - Mike and I should be back by Thursday? I will look into reserving a conference line if we want to have the call in the next few days and maybe Mike and I can connect from home, assuming the ice doesn't knock out the power. Molly

-----Original Message-----

From: Biddlecome, William J SAW [<mailto:William.J.Biddlecome@usace.army.mil>]  
Sent: Tuesday, February 11, 2014 8:03 AM  
To: McLendon, Scott C SAW; Wylie, Mike; Wicker, Henry M JR SAW  
Cc: Davis, Molly; Greer, Emily C SAW  
Subject: RE: Spring Creek Farms (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

I'm here in the Washington Office today unless conditions warrant early dismissal later on. Emily is in training in Huntsville. Let me know # etc. for call in if we decide to have one today. Thanks!

Bill

-----Original Message-----

From: McLendon, Scott C SAW  
Sent: Monday, February 10, 2014 5:07 PM  
To: Wylie, Mike; Wicker, Henry M JR SAW  
Cc: Davis, Molly; Biddlecome, William J SAW; Greer, Emily C SAW  
Subject: RE: Spring Creek Farms (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Mike:

I have call at 0930 tomorrow that will last about 30 minutes, other than that I am free, not sure about the rest.

Scott

-----Original Message-----

From: Wylie, Mike [<mailto:Wylie.Mike@epa.gov>]  
Sent: Monday, February 10, 2014 3:34 PM  
To: McLendon, Scott C SAW; Wicker, Henry M JR SAW  
Cc: Davis, Molly  
Subject: [EXTERNAL] Spring Creek Farms

Scott/Henry: I just had a conversation with Abel Harmon on the ditch work. Can we talk tomorrow morning for a short while (I promise a short discussion) on next steps? Molly and I plan on coming to work but we maybe shutdown - everybody is freaked from our last snow/ice debacle.

Thanks



**Greer, Emily C SAW**

---

**From:** Todd Miller [toddm@nccoast.org]  
**Sent:** Thursday, August 29, 2013 8:47 AM  
**To:** Greer, Emily C SAW  
**Cc:** McLendon, Scott C SAW; Wicker, Henry M JR SAW; Derb Carter  
**Subject:** [EXTERNAL] Large-scale wetland conversion now occurring in Pamlico County?  
**Attachments:** PastedGraphic-1.tiff

Dear Emily,

A local farmer in Pamlico County has called me about new ditching and land clearing that is now occurring to convert wetlands to farmland on a 4,000+ acre parcel. His is very concerned that this wetland conversion would be allowed under Section 404 of the federal Clean Water Act. He says he knows the land very well, and it is very wet.

I've attached a map that shows the land that is being ditched. I heard this morning from the local farmer that there are five bulldozers and a dragline on site, and working.

Has this conversion been approved by the U.S. Corps of Engineers? Has a permit been issued to allow this? I would like to review the files on the project, and any other information that will help me better understand how this is allowed to occur.

I would appreciate your response on this matter since the clearing is now underway. We will file any necessary requests under the Freedom of Information Act if that's required.

Thank you.

Todd

Todd Miller, Executive Director  
N.C. Coastal Federation  
3609 N.C. 24 (Ocean)  
Newport, N.C. 28570  
(252) 393-8185  
(252) 393-7508 (fax)  
(252) 241-0191 (cell)

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11/5/14  
no attachment  
included *Y*

**Greer, Emily C SAW**

---

**From:** Todd Miller [toddm@nccoast.org]  
**Sent:** Wednesday, September 04, 2013 12:24 PM  
**To:** Greer, Emily C SAW  
**Cc:** McLendon, Scott C SAW; Wicker, Henry M JR SAW; Derb Carter; Biddlecome, William J SAW; Scarbraugh, Anthony; Pruitt, Carl E SAW  
**Subject:** Re: [EXTERNAL] Large-scale wetland conversion now occurring in Pamlico County? (UNCLASSIFIED)  
**Attachments:** DCM wetland data on Pamlico Tracts.doc

Dear Emily,

Attached are series of wetland maps that come from the mapping tool provided by the N.C. Division of Coastal Management website. As you can see from the attached file, much of this land is considered to be wetlands by the Division with "substantial" ecological and water quality values.

Local landowners inform me that prior to around 1990, the only ditches on this property were the roadside ditches. The previous land owners dug some other ditches a few years after they had most of it logged in 1990. There were no pine plantations planted. The trees grew back naturally with a lot of sprouts from old stumps. predominately hardwoods. Currently, they are clearing full speed ahead, and we understand they have plans to dig two new ditches between the old ones. The old ones are approximately 660 feet apart. The soil series for this property is mostly Arapahoe which is a very wet soil.

From the historic map (1993) you provided and the recent google map, it looks like some of the area was ditched for silviculture, some not. Given the nature of these soils and the spacing between ditches, it is very doubtful that much of the initial ditching converted the area from wetland to upland especially the areas that are largely untouched.

We believe that any new ditching in a wetland requires a permit. Maintenance of existing ditches is exempt but cannot convert a wetland to an upland, especially if these ditches were dug for silviculture reasons. Maintenance cannot exceed original contours of the ditch. If a ditched wetland is converted from silviculture to agriculture a permit is required. Agricultural and silvicultural activities are exempt only if part of an established, ongoing operation: "Activities which bring an area into farming or silviculture are not part of an established operation." If the wetland forests converted to pine plantation are nonriverine hardwoods, cypress, or others listed in the 1995 silviculture guidance, a permit is required.

Once we review the file materials we've requested with our FOIA letter, we will be in a better position to understand how this clearing and drainage operation is proceeding without any permits. We view this situation with alarm given the vast acreage involved, and the proximity of the drainage to sensitive coastal waters and fisheries.

Please make this email and attachment part of the official file for the project, and part of the record of decision regarding how this property and its wetlands are regulated.

Thank you.

Todd Miller

Todd Miller, Executive Director

N.C. Coastal Federation  
3609 N.C. 24 (Ocean)  
Newport, N.C. 28570  
(252) 393-8185  
(252) 393-7508 (fax)  
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On Aug 29, 2013, at 9:41 AM, "Greer, Emily C SAW" <Emily.C.Greer@usace.army.mil> wrote:

Classification: UNCLASSIFIED  
Caveats: NONE

Mr. Miller-

On August 7, 2013, Anthony Scarbraugh with NCDENR Division of Water Resources and I met with Mr. Abel Harmon, a representative of Spring Creek Farms LLC (the current property owner), at the properties known as Pamlico County Tax Pin No(s). 6499009986 and 6498171514 as a result multiple citizen complaints of possible conversion of silviculture lands to agriculture lands as well as a request from Mr. Harmon. During the meeting, Mr. Harmon stated the property owner's intent was to clear the above-mentioned properties for agriculture production after receiving the applicable authorization from USACE. Mr. Harmon further stated that no clearing for agricultural purposes would occur without the applicable authorization from USACE. During the inspection, we observed maintenance of the existing drainage ditches, ongoing logging activities, and no clearing of the subject properties that violated wetland standards regulations under the Clean Water Act. The drainage ditches have been present since at least March of 1993 as noted in the attached aerial photograph. We have no knowledge of new ditches installed on the property by Spring Creek Farms, LLC. In accordance with Mr. Harmon's statement during our meeting, a wetland delineation has been completed and the results submitted to this office on August 21, 2013, to be reviewed by the USACE prior to any clearing for agricultural purposes. I have not yet reviewed Mr. Harmon's submittal.

Feel free to contact me with any further questions.

Emily Greer  
Program Specialist  
U.S. Army Corps of Engineers  
Wilmington District-Washington Field Office  
2407 West 5th Street  
Washington, NC 27889  
910.251.4567 (o)  
252.975.1399 (f)

-----Original Message-----

From: Todd Miller [mailto:[toddm@nccoast.org](mailto:toddm@nccoast.org)]  
Sent: Thursday, August 29, 2013 8:47 AM  
To: Greer, Emily C SAW  
Cc: McLendon, Scott C SAW; Wicker, Henry M JR SAW; Derb Carter  
Subject: [EXTERNAL] Large-scale wetland conversion now occurring in Pamlico County?

Dear Emily,

A local farmer in Pamlico County has called me about new ditching and land clearing that is now occurring to convert wetlands to farmland on a 4,000+ acre parcel. His is very concerned that this wetland conversion would be allowed under Section 404 of the federal Clean Water Act. He says he knows the land very well, and it is very wet.

I've attached a map that shows the land that is being ditched. I heard this morning from the local farmer that there are five bulldozers and a dragline on site, and working.

Has this conversion been approved by the U.S. Corps of Engineers? Has a permit been issued to allow this? I would like to review the files on the project, and any other information that will help me better understand how this is allowed to occur.

I would appreciate your response on this matter since the clearing is now underway. We will file any necessary requests under the Freedom of Information Act if that's required.

Thank you.

Todd

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Classification: UNCLASSIFIED  
Caveats: NONE

<Historic Aerial of Spring Creek Farms LCC Property.jpg>



**Greer, Emily C SAW**

---

**From:** Todd Miller [toddm@nccoast.org]  
**Sent:** Wednesday, September 04, 2013 8:41 AM  
**To:** McLendon, Scott C SAW; Wicker, Henry M JR SAW; Biddlecome, William J SAW; Anthony Scarbraugh; Pruitt, Carl E SAW; Greer, Emily C SAW  
**Cc:** Derb Carter  
**Subject:** Re: [EXTERNAL] Large-scale wetland conversion now occurring in Pamlico County? (UNCLASSIFIED)  
**Attachments:** FOIA request Spring Creek Farms LLC Pamlico County.pdf

Please see attached my FOIA Request for Spring Creek Farms, Pamlico County. A copy of this letter is being sent via the U.S. Postal Service as well. Please let me know if you need any further information regarding this request.

Sincerely,

Todd Miller, Executive Director  
N.C. Coastal Federation  
3609 N.C. 24 (Ocean)  
Newport, N.C. 28570  
(252) 393-8185  
(252) 393-7508 (fax)  
(252) 241-0191 (cell)

On Aug 29, 2013, at 9:41 AM, "Greer, Emily C SAW" <[Emily.C.Greer@usace.army.mil](mailto:Emily.C.Greer@usace.army.mil)> wrote:

> Classification: UNCLASSIFIED

> Caveats: NONE

>

> Mr. Miller-

>

> On August 7, 2013, Anthony Scarbraugh with NCDENR Division of Water Resources and I met with Mr. Abel Harmon, a representative of Spring Creek Farms LLC (the current property owner), at the properties known as Pamlico County Tax Pin No(s). 6499009986 and 6498171514 as a result multiple citizen complaints of possible conversion of silviculture lands to agriculture lands as well as a request from Mr. Harmon. During the meeting, Mr. Harmon stated the property owner's intent was to clear the above-mentioned properties for agriculture production after receiving the applicable authorization from USACE. Mr. Harmon further stated that no clearing for agricultural purposes would occur without the applicable authorization from USACE. During the inspection, we observed maintenance of the existing drainage ditches, ongoing logging activities, and no clearing of the subject properties that violated wetland standards regulations under the Clean Water Act. The drainage ditches have been present since at least March of 1993 as noted in the attached aerial photograph. We have no knowledge of new ditches installed on the property by Spring Creek Farms, LLC. In accordance with Mr. Harmon's statement during our meeting, a wetland delineation has been completed and the results submitted to this office on August 21, 2013, to be reviewed by the USACE prior to any clearing for agricultural purposes. I have not yet reviewed Mr. Harmon's submittal.

>

> Feel free to contact me with any further questions.

>

>

> Emily Greer  
> Program Specialist  
> U.S. Army Corps of Engineers  
> Wilmington District-Washington Field Office  
> 2407 West 5th Street  
> Washington, NC 27889  
> 910.251.4567 (o)  
> 252.975.1399 (f)

>  
>  
>  
> -----Original Message-----

> From: Todd Miller [<mailto:toddm@nccoast.org>]  
> Sent: Thursday, August 29, 2013 8:47 AM  
> To: Greer, Emily C SAW  
> Cc: McLendon, Scott C SAW; Wicker, Henry M JR SAW; Derb Carter  
> Subject: [EXTERNAL] Large-scale wetland conversion now occurring in Pamlico County?

>  
> Dear Emily,

>  
> A local farmer in Pamlico County has called me about new ditching and land clearing that is now occurring to convert wetlands to farmland on a 4,000+ acre parcel. His is very concerned that this wetland conversion would be allowed under Section 404 of the federal Clean Water Act. He says he knows the land very well, and it is very wet.

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> I've attached a map that shows the land that is being ditched. I heard this morning from the local farmer that there are five bulldozers and a dragline on site, and working.

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> I would appreciate your response on this matter since the clearing is now underway. We will file any necessary requests under the Freedom of Information Act if that's required.

>  
> Thank you.

>  
> Todd

>  
> Todd Miller, Executive Director  
> N.C. Coastal Federation  
> 3609 N.C. 24 (Ocean)  
> Newport, N.C. 28570  
> (252) 393-8185  
> (252) 393-7508 (fax)  
> (252) 241-0191 (cell)

>  
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>  
>  
> Classification: UNCLASSIFIED  
> Caveats: NONE

>  
>  
> <Historic Aerial of Spring Creek Farms LCC Property.jpg>



## North Carolina Coastal Federation

*Working Together for a Healthy Coast*

September 4, 2013

U.S. Army Corps of Engineers  
Office of Counsel  
Attn: FOIA Officer  
69 Darlington Avenue  
Wilmington, NC 28403

Re: Freedom of Information Act Request

Dear FOIA Officer:

Under the Freedom of Information Act (5 U.S.C. Section 552), I am requesting the following documents:

**All documents related to activities of Spring Creek Farms LLC in Pamlico County, N.C. including correspondence, emails, phone records, notes, inspection reports, records of site visits, and requests for authorizations of any kind related to activities in Pamlico County, NC.**

I would be happy to receive this information in an electronic format either via email, from an FTP site, or on CD or DVD. Please see email from Emily Greer below if you need any further details on the documents and files that I'm requesting.

As a representative of a non-profit conservation group (N.C. Coastal Federation) as well as of our online news service called *Coastal Review Online* (the federation is a member of the N.C. Press Association), I am gathering information on this project that is of current interest to the public because it involves potential conversion of wetlands to farm land in a manner that will not only destroy the wetlands, but which will have major water quality impacts on downstream estuaries and fish habitats.

Please take note of the Office of Management and Budget guidelines published March 27, 1987 (52 FR 10012) that include electronic publications such as *Coastal Review Online* as representatives of the news media. Please also remember that the U.S. Court of Appeals for the District of Columbia has determined that even a nonprofit clearinghouse of information can qualify as a representative of the news media, See *National Security Archive v. U.S. Department of Defense*, 279 U.S. App. D.C. 308 (D.C. 1989).





I am requesting a waiver of all fees under 5 U.S.C. Section 552(a)(4)(A)(iii). The information I seek is in the public interest because it will contribute significantly to public understanding of the operations or activities of the government and is not primarily in my commercial interest. I believe I meet the criteria for a fee waiver recognized by the U.S. Justice Department - in its policy guidance of April 1987 - and by the federal courts, See *Project on Military Procurement v. Department of the Navy*, 710 F. Supp. 362 363, 365 (D.C.D. 1989).

My request concerns the operations or activities of government because as stated in the attached email jurisdictional and permit decision are being made that could potentially affect nearly 4,500 acres of land with hydric soils. The land is situated where drainage from this property will have potentially serious consequences for coastal water quality and fisheries productivity.

Also, the information sought has informative value, or potential for contribution to public understanding. Please note the decision in *Elizabeth Eudey v. Central Intelligence Agency*, 478 F. Supp. 1175 1176 (D.C.D. 1979) (even a single document has the potential for contributing to public understanding). I plan to disseminate this information to the public at large in the following manner: news articles in *Coastal Review Online*, sharing copies with other non-profit conservation groups and interested public, and letters to public officials and decision-makers. We will also use the information to comment directly to the Corps of Engineers on this project. The release of this information will have a significant impact on public understanding because there has currently been no public notice or public discussion of this proposal to convert potential wetlands to farmland.

In your deliberations, please take note of the following cases: *Campbell v. U.S. Department of Justice*, 334 U.S. App. D.C. (1998) (administrative and seemingly repetitious information is not exempt from fee-waiver consideration); *Project on Military Procurement* (agencies cannot reject a fee waiver based on the assumption that the information sought is covered by a FOIA exemption; and *Landmark Legal Foundation v. Internal Revenue Service*, 1998 U.S. Dist. LEXIS 21722 (D.C.D. 1998) (the fact that the information will soon be turned over to a public body does not exempt the material from fee-waiver consideration).

I look forward to your response within the 20 working days, as outlined by the statute.

Thank you in advance,



Todd Miller, Executive Director  
N.C. Coastal Federation  
3609 N.C. 24 (Ocean)  
Newport, N.C. 28570  
(252) 393-8185  
(252) 393-7508 (fax)  
(252) 241-0191 (cell)

cc: Derb Carter, SELC

Classification: UNCLASSIFIED  
Caveats: NONE

Mr. Miller-

On August 7, 2013, Anthony Scarbraugh with NCDENR Division of Water Resources and I met with Mr. Abel Harmon, a representative of Spring Creek Farms LLC (the current property owner), at the properties known as Pamlico County Tax Pin No(s). 6499009986 and 6498171514 as a result multiple citizen complaints of possible conversion of silviculture lands to agriculture lands as well as a request from Mr. Harmon. During the meeting, Mr. Harmon stated the property owner's intent was to clear the above-mentioned properties for agriculture production after receiving the applicable authorization from USACE. Mr. Harmon further stated that no clearing for agricultural purposes would occur without the applicable authorization from USACE. During the inspection, we observed maintenance of the existing drainage ditches, ongoing logging activities, and no clearing of the subject properties that violated wetland standards regulations under the Clean Water Act. The drainage ditches have been present since at least March of 1993 as noted in the attached aerial photograph. We have no knowledge of new ditches installed on the property by Spring Creek Farms, LLC. In accordance with Mr. Harmon's statement during our meeting, wetland delineation has been completed and the results submitted to this office on August 21, 2013, to be reviewed by the USACE prior to any clearing for agricultural purposes. I have not yet reviewed Mr. Harmon's submittal.

Feel free to contact me with any further questions.

Emily Greer  
Program Specialist  
U.S. Army Corps of Engineers  
Wilmington District-Washington Field Office  
2407 West 5th Street  
Washington, NC 27889  
910.251.4567 (o)  
252.975.1399 (f)

**Wylie, Mike**

**From:** Todd Miller <toddm@nccoast.org>  
**Sent:** Tuesday, June 03, 2014 6:58 AM  
**To:** Wylie, Mike  
**Cc:** Evans, David; Linn, Jennifer  
**Subject:** Fwd: continued ditching on Atlas Tract

Mike,

These photos were sent to me this morning by the farmer next door to the Atlas Tract in Pamlico County. Looks like the final steps of the conversion of these wetlands to agriculture are taking place. Given that this portion of the property was shown as wetlands on the National Wetland Inventory (and the adjacent higher elevation farmland is classified as Prior Converted Wetlands by NRCS), the next national assessment of coastal wetland losses will show this as an additional loss of 250 acres (plus additional acreage from other losses due to ditching throughout the 4,600 acre property).

We requested copies of any permits issued by the Corps that authorized the original ditches that were dug on this land sometime that occurred between 1987 and 1990. The Corps has indicated that no permits were ever issued. Thus, if these original ditches converted this land to uplands, that was done so illegally. Spring Creek Farms, LLC is not registered to do business in N.C.

I understood from Derb Carter that an enforcement letter was in the works on this property. What is the status of that letter?

Best regards, Todd

Begin forwarded message:

**From:** Todd Miller <toddm@nccoast.org>  
**Subject:** continued ditching on Atlas Tract  
**Date:** June 3, 2014 at 6:42:00 AM EDT  
**To:** "Jarvis, Craig" <cjarvis@newsobserver.com>

Here are two photos I received this morning from a local farmer that shows additional ditching on the Atlas property. The ditches are being put between the older ditches to provide a spacing the is typical of agricultural drainage (about every 330 feet apart). The final photo is the same location in April. Todd

**Subject:** [FWD: ]  
**Date:** June 3, 2014 at 6:29:32 AM EDT  
**To:** "Todd Miller" <toddm@nccoast.org>



Begin forwarded message:





same spot 4/25/2014 in first photo



**Wylie, Mike**

**From:** Todd Miller <toddm@nc coast.org>  
**Sent:** Wednesday, September 17, 2014 7:16 PM  
**To:** Wylie, Mike  
**Cc:** Derb Carter  
**Subject:** Fwd: Atlas tract today

Sent from my iPhone

Begin forwarded message:

**Date:** September 17, 2014 at 5:20:25 PM EDT  
**To:** Todd Miller <toddm@nc coast.org>  
**Subject:** Atlas tract today



Sent from my iPhone

**Wylie, Mike**

---

**From:** Todd Miller <toddm@nccoast.org>  
**Sent:** Thursday, September 11, 2014 2:36 PM  
**To:** Wylie, Mike  
**Cc:** Derb Carter  
**Subject:** Fwd: Atlas tract-spring creek farms update

Mike,

I recently received the following report from a local farmer regarding activities occurring on the Atlas Tract. I'd appreciate an update on the status of EPA's actions regarding this property since it appears that they are still working on farming the recently converted wetland acreage (when the property isn't too wet to work!).

Best regards,  
Todd

Todd Miller, Executive Director  
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It has been too wet for them to work all but about two weeks the last week of May and the first week of June. That's when they dug their new ditches. Last week got dry enough for them to work again and they had 4 trucks of lime hauled in and dumped and a big 4-wheel drive tractor and new ground plow to start plowing up the grass that is about 3 feet tall. It rained almost three inches yesterday and today so that will slow them some.





IN REPLY REFER TO

**DEPARTMENT OF THE ARMY  
WILMINGTON DISTRICT, CORPS OF ENGINEERS**

Washington Regulatory Field Office

2407 W 5<sup>th</sup> Street

Washington, North Carolina 27889

04 November 2013

County of Pamlico Board of Commissioners  
P.O. Box 776  
Bayboro, North Carolina 28515

Dear Commissioners:

To address concerns raised by local citizens regarding the presence of wetlands subject to U.S. Army Corps of Engineers jurisdiction at the Spring Creek Farm tract, we have prepared the following statement for you to disseminate to the public at the Town Meeting tonight or as you see fit.

On August 7, 2013, representatives of the U.S. Army Corps of Engineers, Wilmington District met with Department of Environment and Natural Resources-Division of Water Resources personnel and a Spring Creek Farms representative, Mr. Able Harmon, on a tract owned by Spring Creek Farms, LLC located on Trent Road in Merritt, Pamlico County, North Carolina.

The meeting's purpose was to determine if waters or wetlands of the United States, subject to the requirements of Section 404 of the Clean Water Act, were present on a 250-acre parcel that is part of a larger 4600+ acre tract. A thorough investigation was conducted utilizing current guidance for making wetland determinations including the 1987 Corps of Engineers Wetland Delineation Manual and the Atlantic and Gulf Coastal Plain Regional Supplement to the 1987 Manual. The investigation of the 250-acres revealed the hydrology parameter was not met; therefore, the project area is not a wetland and is not subject to Clean Water Act jurisdiction.

At this time, the Corps has not assessed any other portion of the 4600+ acres. Additionally, the Corps has not been provided with any evidence indicating a violation of federal law has been made by the current owners or their operators. While we appreciate concerns for the environment as they relate to wetland impacts, the Corps is not soliciting public comment regarding this upland area since there are no permits associated with work being conducted on the 250-acres.

Sincerely,

William J. Biddlecome  
Chief, Washington Regulatory Field Office

**U.S. ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT**

Action Id. SAW-2013-01700 County: Pamlico U.S.G.S. Quad: NC-ORIENTAL

**NOTIFICATION OF JURISDICTIONAL DETERMINATION**

**Property Owner:** Mr. Mark Beck  
Spring Creek Farms, LLC  
**Address:** 19051 Athens Black Top Road  
Petersburg, Illinois 62675

Size (acres) 250  
Nearest Waterway Fork Run  
USGS HUC 3020105

Nearest Town Merritt  
River Basin Pamlico Sound, North Carolina.  
Coordinates Latitude: 35.075446  
Longitude: -76.688869

Location description: The property is located south of Trent Road, approximately 1.5 miles east of Highway 55 in Merritt, Pamlico, North Carolina. The project area assessed comprises 250 acres of siculture land with ditching spaced approximately 650 feet apart, which has allowed for adequate drainage of the site and removing this indicator from the needed parameters to meet the criteria for a wetland.

**Indicate Which of the Following Apply:**

**A. Preliminary Determination**

- ☐ Based on preliminary information, there may be wetlands on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

**B. Approved Determination**

- ☐ There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- ☐ There are waters of the U.S. including wetlands on the above described property subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
  - ☐ We strongly suggest you have the wetlands on your property delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.
  - ☐ The waters of the U.S. including wetlands on your project area have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.
  - ☐ The waters of the U.S. including wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on \_\_\_\_\_. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- ☒ There are no waters of the U.S., to include wetlands, present on the above described project area which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our

published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

- The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Morehead City, NC, at (252) 808-2808 to determine their requirements.

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact Emily Greer at 910-251-4567 or Emily.C.Greer@usace.army.mil.

**C. Basis For Determination:** The project area (250 acres) does not exhibit the hydrology indicator needed to meet the criteria for a determination of wetland according to the 1987 Corps Wetland Delineation Manual and the Atlantic and Gulf Coastal Plain Regional Supplement (Supplement) to the 1987 Wetland Delineation Manual.

**D. Remarks:** None

#### **E. Attention USDA Program Participants**

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

**F. Appeals Information** (This information applies only to approved jurisdictional determinations as indicated in B. above)

This correspondence constitutes an approved jurisdictional determination for the above described site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers  
South Atlantic Division  
Attn: Jason Steele, Review Officer  
60 Forsyth Street SW, Room 10M15  
Atlanta, Georgia 30303-8801

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by December 30, 2013.

**\*\*It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.\*\***

**GREER.EMILY.C.138532530**

Corps Regulatory Official: 0

Digitally signed by GREER.EMILY.C.1385325300  
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,  
ou=USA, cn=GREER.EMILY.C.1385325300  
Date: 2013.10.02 13:38:18 -0400

Date: October 1, 2013

Expiration Date: October 1, 2018

*The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the attached customer Satisfaction Survey or visit <http://per2.nwp.usace.army.mil/survey.html> to complete the survey online.*

# NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Mr. Mark Beck

File Number: SAW-2013-01700

Date: October 1, 2013

Attached is:

See Section below

☐ INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)

A

☐ PROFFERED PERMIT (Standard Permit or Letter of permission)

B

☐ PERMIT DENIAL

C

☒ APPROVED JURISDICTIONAL DETERMINATION

D

☐ PRELIMINARY JURISDICTIONAL DETERMINATION

E

**SECTION I** - The following identifies your rights and options regarding an administrative appeal of the above decision.

Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg> or

Corps regulations at 33 CFR Part 331.

## A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

## B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:

**District Engineer, Wilmington Regulatory Division,  
Attn: Emily Greer**

If you only have questions regarding the appeal process you may also contact:

**Mr. Jason Steele, Administrative Appeal Review Officer  
CESAD-PDO  
U.S. Army Corps of Engineers, South Atlantic Division  
60 Forsyth Street, Room 10M15  
Atlanta, Georgia 30303-8801  
Phone: (404) 562-5137**

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

\_\_\_\_\_  
Signature of appellant or agent.

Date:

Telephone number:

**For appeals on Initial Proffered Permits send this form to:**

**District Engineer, Wilmington Regulatory Division, Attn: Emily Greer, 69 Darlington Avenue, Wilmington,  
North Carolina 28403**

**For Permit denials, Proffered Permits and approved Jurisdictional Determinations send this form to:**

**Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Jason Steele,  
Administrative Appeal Officer, CESAD-PDO, 60 Forsyth Street, Room 10M15, Atlanta, Georgia 30303-8801  
Phone: (404) 562-5137**



August 9, 2013

Emily Greer

US Army Corps of Engineers

2407 W. 5<sup>th</sup> Street

Washington, North Carolina 27889

Emily,

Please reference our onsite meeting on August 7, 2013, at property owned by Spring Creek Farms, LLC, located off State Road 1322 (Trent Road) near Merritt, in Pamlico County, North Carolina. As requested, I have attached a location map of the Project Area with the location of my Sample data points for the Wetland Data Sheets. I prepared four separate data sheets, one within each block of ditches and covering both soil types mapped on the property. Although I conducted my field work in early June of this year, the rainfall for the area has been near or slightly above average. I believe the extensive network of drainage ditches on the tract has resulted in the removal of the hydrology parameters required to meet the wetland criteria described in the 1987 Corps of Engineers Wetland Delineation Manual and subsequent Regional Supplement for the Atlantic and Gulf Coastal Plain Region. Both the Arapahoe and Stockade soil types mapped on the tract are Hydric and the vegetation parameter is met through the FAC-Neutral Test. As discussed onsite, your review confirmed my determination that the site no longer supports hydrology sufficient to meet the Section 404 wetland classification. In this regard, please provide your confirmation in writing so the owner can begin his preparations to clear the property and remove the stumps and woody vegetative debris. He will plan to windrow and burn piles as conditions permit.

Thank You for your prompt response to meet with me onsite and review the property. The Project Area that we met on is approximately 251 acres and outlined in red on the location map. Please let me know if you need anything else from me on this site and I will certainly look forward to working with you in the future to continue work on the land. I am providing the appropriate contact information below for me and the property owner. Thanks again for all your help!

Sincerely,

Abel Harmon

1255 Juniper Bay Road

Swan Quarter, North Carolina 27885

252-916-5602

Mark Beck

Spring Creek Farms, LLC

19051 Athens Black Top Road

Petersburg, Illinois 62675

**APPROVED JURISDICTIONAL DETERMINATION FORM**  
**U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):** October 1, 2013

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** Wilmington District, Spring Creek Farms, LLC-Conversion, SAW-2013-01700

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: **North Carolina** County/parish/borough: **Pamlico** City: **Merritt**  
Center coordinates of site (lat/long in degree decimal format): Lat. **35.075446°**, Long. **-76.688869°**  
Universal Transverse Mercator: **18 346021.86 3882714.11**

Name of nearest waterbody:

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Fork Run**

Name of watershed or Hydrologic Unit Code (HUC): **Pamlico Sound, North Carolina, 3020105**

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form:

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

☐ Office (Desk) Determination. Date:

☒ Field Determination. Date(s): **7 August 2013**

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain:

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☐ Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet, wide, and/or acres.

Wetlands: acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known):

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

**SECTION III: CWA ANALYSIS**

**A. TNWs AND WETLANDS ADJACENT TO TNWs**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>:

Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural

☐ Artificial (man-made). Explain:

☐ Manipulated (man-altered). Explain:

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

**Tributary properties with respect to top of bank (estimate):**

Average width: feet

Average depth: feet

Average side slopes: **Pick List**

**Primary tributary substrate composition (check all that apply):**

☐ Silts

☐ Sands

☐ Concrete

☐ Cobbles

☐ Gravel

☐ Muck

☐ Bedrock

☐ Vegetation. Type/% cover:

☐ Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

**(c) Flow:**

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:

☐ Dye (or other) test performed:

Tributary has (check all that apply):

☐ Bed and banks

☐ OHWM<sup>6</sup> (check all indicators that apply):

☐ clear, natural line impressed on the bank

☐ changes in the character of soil

☐ shelving

☐ vegetation matted down, bent, or absent

☐ leaf litter disturbed or washed away

☐ sediment deposition

☐ water staining

☐ other (list):

☐ Discontinuous OHWM.<sup>7</sup> Explain:

☐ the presence of litter and debris

☐ destruction of terrestrial vegetation

☐ the presence of wrack line

☐ sediment sorting

☐ scour

☐ multiple observed or predicted flow events

☐ abrupt change in plant community

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:

☐ oil or scum line along shore objects

☐ fine shell or debris deposits (foreshore)

☐ physical markings/characteristics

☐ tidal gauges

☐ other (list):

☐ Mean High Water Mark indicated by:

☐ survey to available datum;

☐ physical markings;

☐ vegetation lines/changes in vegetation types.

**(iii) Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

**(iv) Biological Characteristics. Channel supports (check all that apply):**

☐ Riparian corridor. Characteristics (type, average width):

☐ Wetland fringe. Characteristics:

☐ Habitat for:

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☐ Aquatic/wildlife diversity. Explain findings:

<sup>6</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size:            acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Pick List. Explain:

Surface flow is: Pick List

Characteristics:

Subsurface flow: Pick List. Explain findings:

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☐ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain:

☐ Ecological connection. Explain:

☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are Pick List river miles from TNW.

Project waters are Pick List aerial (straight) miles from TNW.

Flow is from: Pick List.

Estimate approximate location of wetland as within the Pick List floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width):

☐ Vegetation type/percent cover. Explain:

☐ Habitat for:

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☐ Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: Pick List

Approximately            acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent



wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

**Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:**

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

**D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):**

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☐ TNWs: linear feet, wide, Or acres.
- ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet wide.
  - ☐ Other non-wetland waters: acres.
- Identify type(s) of waters:

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet, wide.
  - ☐ Other non-wetland waters: acres.
- Identify type(s) of waters:

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

<sup>8</sup>See Footnote # 3.

- ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

- ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area:          acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area:          acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area:          acres.

7. **Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from "waters of the U.S.," or  
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.  
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
☐ which are or could be used for industrial purposes by industries in interstate commerce.  
☐ Interstate isolated waters. Explain:  
☐ Other factors. Explain:

**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters:          linear feet,          wide.  
☐ Other non-wetland waters:          acres.  
Identify type(s) of waters:  
☐ Wetlands:          acres.

F. **NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- ☒ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.  
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  
☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).  
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:  
☐ Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, wide.  
☐ Lakes/ponds: acres.  
☐ Other non-wetland waters: acres. List type of aquatic resource:  
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, wide.  
☐ Lakes/ponds: acres.  
☐ Other non-wetland waters: acres. List type of aquatic resource:  
☐ Wetlands: acres.

#### **SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Location map**  
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.  
☒ Office concurs with data sheets/delineation report.  
☐ Office does not concur with data sheets/delineation report.  
☐ Data sheets prepared by the Corps:  
☐ Corps navigable waters' study:  
☒ U.S. Geological Survey Hydrologic Atlas:  
☐ USGS NHD data.  
☒ USGS 8 and 12 digit HUC maps.  
☒ U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; NC-ORIENTAL**  
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:  
**[http://casoilresource.lawr.ucdavis.edu/soil\\_web/export.php?format=kmz&srid=4326&](http://casoilresource.lawr.ucdavis.edu/soil_web/export.php?format=kmz&srid=4326&)**  
☒ National wetlands inventory map(s). Cite name: **<http://www.fws.gov/wetlands/Data/Google-Earth.html>**  
☐ State/Local wetland inventory map(s):  
☐ FEMA/FIRM maps:  
☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)  
☒ Photographs: ☒ Aerial (Name & Date): **Google Earth 3.6.1993; 1.24.1998; 12.31.2002; 5.23.2003; 10.16.2005; 3.30.2008; 12.31.2011**  
or ☐ Other (Name & Date):  
☐ Previous determination(s). File no. and date of response letter:  
☐ Applicable/supporting case law:  
☐ Applicable/supporting scientific literature:  
☐ Other information (please specify):

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

**The hydrology indicator is not present; therefore, no wetlands are present and no permit is required.**